

# Bill 25 (2019), CD1 Testimony

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 11:12 AM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name	William Metzger
Phone	8089886220
Email	wjmetzger@hotmail.com
Meeting Date	02-26-2020
Council/PH Committee	Zoning
Agenda Item	Bill 25
Your position on the matter	Support
Representing Organization	Organization 350 hawaii
Do you wish to speak at the hearing?	No
Written Testimony	To counter the climate crisis hard decisions affecting some local jobs (gas) MUST be made. And we MUST plan for more EV stations.
Testimony Attachment	
Accept Terms and Agreement	1

IP: 192.168.200.67

Honolulu City Council  
Zoning, Planning and Housing Committee  
Support for Bill 25, "Relating to the Adoption of the State Energy Conservation Code"  
February 27, 2020, 9:00 AM hearing

Aloha Chair Menor, Vice Chair Waters, and members of the Committee,

I am testifying in strong support of Bill 25, "Relating to the Adoption of the State Energy Conservation Code."

This is a critical clean energy and climate measure that would modernize the City & County of Honolulu's (Honolulu's) building energy code. This modernization updates Honolulu's existing building energy code—which is nearly fourteen years out of date—to increase occupant health and comfort while significantly reducing energy use for new homes and buildings. The proposed code revision reflects broad changes in technology, building materials, and best practices, while considering Honolulu's unique island and building environment.

Bill 25 helps Honolulu make the transition to zero-emission vehicles by requiring that a certain percentage of new parking stalls be "EV-ready" (with wiring and capacity for EV chargers to be installed). This will help to make electric vehicles more accessible to residents and reduce the overall cost of our transition to clean transportation. This provision should be strengthened significantly, however. We respectfully request that this committee amend Bill 25 to include a requirement that 100% of new parking stalls (for commercial and multi-family buildings) be prepared for Level 2 charging capacity, similar to the city of Vancouver. This will help to "future-proof" new construction and accelerate our clean transportation future.

As VP of Business Development for Aloha Charge, Hawaii's leading expert in EV Charging, I can attest to the fact that Infrastructure upgrade costs are the number one reason that EV Charging station installation projects are stalled or do not happen at all. On top of that, I can also attest to the fact that it is proven that it will cost approximately 91% to retrofit EV Infrastructure post-construction. While many new developments may oppose this Bill or 100% of new parking stalls be wired for Level 2 charging capacity, I like to compare it to data cables from about 30 years ago. Many new builds did not see the need to spend additional funding on data cables, and this caused exorbitant post-construction infrastructure costs to retrofit buildings with data. On the flip side of that, the buildings that DID include data in construction build... were patting themselves on the back 5 years down the line for being so forward thinking. I truly believe we will see the same scenario here. Three years down the line the developers will have no problem taking credit for the 'great decision' they made to prewire their buildings. Cars ARE becoming electric. Mercedes just announced that they are stopping the development of combustion engines and the last one they will sell will be in 2039. Every car manufacturer has at least one EV. This is the trend of the entire industry... and we can be prepared for it... or continue to play catch up costing MILLIONS if not BILLIONS of public and private money down the road.

To speak specifically to the points system as it relates to Levels of charging stations I think it is important to note that commercial units are all now at least 30-32 amps, unless they power share.

One important reason for this is that all cars come with a plug so there is no demand for a 16amp commercial unit.

Please advance Bill 25 with this EV-ready amendment.

Thank you for considering my testimony.

Amber Stone Napoleon  
Aloha Charge



# Electrification Coalition

February 25, 2020

The Honorable Ron Menor, Chair,  
Members of the Honolulu City Council,  
Committee on Zoning, Planning, and Housing  
530 South King Street, Room 202  
Honolulu, Hawai'i  
96813

Re: Bill 25(2019) – SUPPORT

Dear Chair Menor and Committee members:

The Electrification Coalition is pleased to offer this letter of support for the Bill 25 Energy Code Update to help accelerate electric vehicle adoption and for Hawaii to achieve its goal of transitioning all transportation to renewable fuels by 2035.

The Electrification Coalition (EC) is a nonpartisan, not-for profit group of business leaders committed to promoting policies and actions that facilitate the deployment of electric vehicles on a mass scale in order to combat economic, environmental, and national security dangers caused by our dependence on oil. Electric vehicles plug into a grid that is domestic, diverse, and can insulate our business and consumers from the volatile nature of oil prices.

The Electrification Coalition has supported EV ready requirements around the country as an important policy that can help accelerate EV adoption. Making charging more convenient and accessible to consumers by requiring small investments at the time of construction will save developers and consumers money while building access to charging to power the future of transportation.

We strongly support this effort by Hawaii to put in place policies that provide the foundation for higher rates of EV growth in the state with passage of this ordinance relating to the adoption of the state energy conservation code. In particular, Councilmember Elefante's proposed CD2 provides important details that are crucial for implementation of these EV readiness rules. By providing for Level 2 infrastructure while also assuring flexibility for developers to build on a project basis with minimum standards, the proposal remains sensitive to developer concerns while also appropriately pushing forward in infrastructure build-out requirements.

If you have any questions, about this letter or the Electrification Coalition's role, please don't hesitate to reach out.

Sincerely,

Benjamin Prochazka  
National Director - Electrification Coalition  
303-717-3657  
[www.ElectrificationCoalition.org](http://www.ElectrificationCoalition.org)

1111 19th Street, NW, Suite 406 Washington, DC 20036



## ELEMENTAL EXCELERATOR

**Written Statement of Elemental Excelerator  
before the Honolulu City Council Committee on Zoning, Planning, and Housing  
February 24, 2020**

**In Consideration of Bill 25 CD 2  
Relating to the Adoption of the State Energy Conservation Code**

**Aloha Chair Menor, Vice-Chair Waters, and Members of the Committee on Zoning, Planning, and Housing:**

Elemental Excelerator respectfully submits support for Bill 25 CD 2, which regulates the design and construction of residential and commercial buildings for the effective use of energy through the adoption of the State Energy Conservation Code (2017), subject to local amendments by the City and County of Honolulu.

Elemental Excelerator is a Honolulu-based growth accelerator program founded and operating in Hawai'i. We have awarded over \$30 million to 99 companies resulting in over 50 demonstration projects in Hawai'i & Asia Pacific. Each year, we evaluate over 500 companies and look for innovative entrepreneurs from around the world to come to Hawai'i and find transformative solutions to help us achieve our 100% clean energy goals and solve our most pressing environmental problems. We select 15-20 companies annually that best fit our mission and fund each company up to \$1 million.

In April 2018, Elemental Excelerator commissioned a study entitled *Transcending Oil: Hawai'i's Path to a Clean Energy Economy*. The study found that in Hawai'i, transitioning to renewable energy is cheaper than sticking with oil. The faster we go, the cheaper it will be. As a policy recommendation, the study identified following through and enforcing current clean energy policies by fully funding and implementing building codes and standards. The report also found that "Energy efficiency efforts increased over the past decade, led by Hawaii Energy's electric savings programs and a **push to update building codes**."<sup>1</sup>

**We support Bill 25 CD 2 for the following reasons:**

1. **It is economically responsible:** According to a report by the National Institute of Building Sciences, for every \$1 invested in updating building codes, it yields an \$11 benefit. Updating building codes increase resiliency and mitigate potential costs that could come from natural disasters caused by climate change.<sup>2</sup>
2. **It opens up opportunities for innovation:** Updating our energy codes can address the rapid changes in technology that innovation has developed. In particular, the

<sup>1</sup> Larsen, J., Mohan, S., Herndon, W., Marsters, P., & Pitt, H. (2018, May 01). *Transcending Oil: Hawai'i's Path to a Clean Energy Economy*, p.13 and 37, Retrieved from <https://rhg.com/research/transcending-oil-hawaiis-path-to-a-clean-energy-economy/>

<sup>2</sup> <https://www.nibs.org/news/432994/National-Institute-of-Building-Sciences-Issues-Interim-Report-on-the-Value-of-Mitigation-.htm>

sections that provide guidance on grid interactive water heaters and electric vehicle charging infrastructure support the deployment of commercial ready clean energy innovation. About 20% of Elemental Excelsior's 99 portfolio companies, such as Hawai'i grown company Pono Home and Shifted Energy, focus on building efficiency, demonstrating an increased opportunity to attract innovation with forward-thinking policies such as Bill 25.

Mahalo for the opportunity to provide testimony.

Sincerely,

  
Dawn Lippert (Feb 24, 2020)

Dawn Lippert  
CEO



#### **Board Members**

##### *President*

Jason Okuhama  
Managing Partner,  
Commercial & Business  
Lending

##### *Secretary*

Marcus Kawatachi  
Deputy Director,  
Hawai'i Civil Rights Commission

Trina Orimoto  
Clinical & Research  
Psychologist

Miwa Tamanaha  
Co-Director,  
Kua'āina Ulu 'Auamo

#### **HACBED Staff**

Brent N. Kakesako  
*Executive Director*

Keoki Noji  
*Chief Operating Officer*

Merri Keli'ikuli  
*Office Manager & Program  
Support*

Sean Tangco  
*Program Specialist*

### **Testimony of Hawai'i Alliance for Community-Based Economic Development Supporting Bill 25, Proposed CD2 Relating to Adoption of the State Energy Conservation Code**

Committee on Zoning, Planning, and Housing, City & County of Honolulu  
Thursday, February 27, 2020, 9:00am

Aloha Members of the Committee on Zoning, Planning, and Housing,

The Hawai'i Alliance for Community-Based Economic Development (HACBED) supports Bill 25, Proposed CD2, which would regulate the design and construction of residential and commercial buildings for the effective use of energy through the adoption of the State Energy Conservation Code.

HACBED was established in 1992 as a nonprofit statewide intermediary to address social, economic, and environmental justice concerns through community-based economic development and asset building strategies. It advances its mission with core competencies in the areas of community and organizational capacity building, community and economic development planning, and asset policy development and advocacy. HACBED supports energy conservation alongside housing affordability for the long-term sustainability of both our 'āina and the families who call this place home.

As such, HACBED supports the Bill 25, Proposed CD2, as it requires electric-vehicle parking in new developments and provides a 4-year of this requirement on nonprofit affordable housing developers building for low-income households up to 80% area medium income and thereafter, reducing said requirements. We would also defer to the expertise of nonprofit development entities that might push for a larger implementation delay based on their experiences.

Mahalo for this opportunity to testify,

Brent N. Kakesako  
Executive Director



February 22, 2020

Committee on Zoning, Planning and Housing  
Thursday, February 27, 2020, 9:00am

**Bill 25, Proposed CD 2 – RELATING TO ADOPTION OF THE STATE ENERGY CONSERVATION CODE**

Aloha Councilmembers:

I am submitting testimony on behalf of Hawaiian Community Assets (HCA), the State's largest Department of Housing and Urban Development (HUD) approved housing counseling agency and its Department of Treasury certified nonprofit Community Development Financial Institution (CDFI), Hawaii Community Lending, to **SUPPORT Bill 25, proposed CD 2 by Councilmember Elefante.**

Bill 25, CD 2 would regulate the design and construction of residential and commercial buildings for the effective use of energy through the adoption of the State Energy Conservation Code.

Our organizations deem action on energy conservation to be critical to the long-term well-being of our island communities. At the same time, housing affordability is necessary to allow our local families to remain rooted in Hawaii.

We believe Bill 25, CD 2 achieves this balance by providing a 4-year delay in implementation of electric-vehicle parking requirements on nonprofit affordable housing developers building for low-income households up to 80% area median income and thereafter, reducing said requirements. There may be need to increase the proposed implementation delay, however, our organizations defer to our nonprofit developer partners for their insight and expertise on this.

Furthermore, to ensure greater cost savings on nonprofit builders and affordability for our low-income households, we recommend the committee also pass Bill 2 to reform parking requirements all together.

Mahalo for your time, leadership and consideration. Please contact me directly at 808.587.7653 or [jeff@hawaiiancommunity.net](mailto:jeff@hawaiiancommunity.net) should you have any questions or need additional information.

Sincerely,

A handwritten signature in black ink that reads "Jeff Gilbreath". The signature is written in a cursive, flowing style.

Jeff Gilbreath  
Director of Lending and Development



**Healthy Climate  
Communities**

**Testimony in support of Bill 25 CD2 (Elefante)**

**COMMITTEE ON ZONING, PLANNING AND HOUSING**

**Hearing Thursday, February 27, 2020**

Aloha Chair Menor, Vice-Chair Waters and Committee Members,

I am writing in strong support of Bill 25 CD 2.

These concrete measures will help us achieve the important goals our City and our State have committed to in order to slow and eventually reverse Climate Change.

The amended Bill is a compromise, but still has well thought out and practical measures. It amends our outdated building energy code, closes the loophole that has allowed developers to install gas rather than solar water heaters, and makes our infrastructure "EV ready" with AC Level 2 electrical rating.

Though Bill 25 CD2, you will leave a legacy of weaning us from expensive, imported fossil fuels as well as reducing the living costs to our residents.

Mahalo,

**Dr. Lisa Marten**

Executive Director  
Healthy Climate Communities  
healthyclimate@hawaii.rr.com

## Hawaii Electric Vehicle Association

PO BOX 6310

Hilo, HI 96720

[hawaiidriveelectric@gmail.com](mailto:hawaiidriveelectric@gmail.com)

Aloha Chair Menor, Vice Chair Waters, and members of the Committee,

On behalf of the Hawaii Electric Vehicle Association, I'm testifying in **support** of Bill 25, with suggested **amendments to CD2**.

This measure will enable Honolulu to dramatically enhance its energy efficiency, reduce its carbon footprint, and enhance the quality of life of residents. When passed, this measure will also inspire counties across the state to follow. It's long overdue.

The Hawaii Electric Vehicle Association is especially supportive of the provision to require new parking stalls to be 'EV charger-ready'. The electrification of transportation complements our 100% RPS goal. While electric vehicle (EV) adoption in the state is still nascent (1% of the over 1M passenger vehicles), it is rising. Consumers are recognizing the environmental, economic, and driving and ownership experience advantages of EVs and they are finding that manufacturers are starting to respond with a wide variety of vehicles. They are available in many sizes, form factors, and price points. Importantly, battery innovations, economies of scale, and a growing pre-owned market are resulting in more affordable EVs. This will only help to increase the desirability and adoption of EVs. Our residents are starting to notice and their preferences for sustainable transportation is improving. The November 2019 Civil Beat article on a climate change survey mentioned that half of respondents are 'likely to change their car to a hybrid or electric vehicle'<sup>1</sup>. Oahu voters want EVs and we must anticipate the demand for EV charging infrastructure.

A barrier to EV adoption growth is the inadequacy of EV charging infrastructure. This is especially critical in Honolulu where there is a large number of condos and apartments. The "EV charger-ready" provision in Bill 25 will serve to future-proof new parking structures and offer home and property owners with the opportunity to 'do-it-right-the-first-time'. Future retro-fitting of structures for what is an expected demand is expensive. It is estimated that retrofitting can cost 4 or more times the cost of installing upfront<sup>2</sup>! Bill 25 will help reduce costs by avoiding the necessity of retrofits.

An important future benefit of broad EV adoption that can be spurred by EV infrastructure investment is the ability for our EVs to contribute to grid stabilization and optimization of load. **Vehicle-to-Grid technology**<sup>3</sup> offers this promise – it will allow for our utilities to optimize its use of intermittent renewables without needing to invest in excess capacity and storage<sup>4</sup>.

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<sup>1</sup> <https://www.civilbeat.org/2019/11/poll-oahu-voters-want-action-on-climate-change/>

<sup>2</sup> <https://www.swenergy.org/cracking-the-code-on-ev-ready-building-codes>

<sup>3</sup> <https://www.nrel.gov/transportation/project-ev-grid-integration.html>

<sup>4</sup> New EVs store a lot of energy – they hold over 60kWh of energy. A popular home battery holds 13.5 kWh.

Another important consideration is the ability for infrastructure investment to translate into significantly more EV charging capacity with **innovations in power management and optimization**. These innovations allow for the electrical infrastructure of a level 2 charging station to support 10 or more charging stations without increasing load requirements. There is a company that has been using this technology across California and has started to do the same in Hawaii<sup>5</sup>. Our investment in the electrical infrastructure needed for EV chargers will likely offer even more value for property owners given the innovations in this space.

With respect, I would like to suggest the following:

- **Maintain the simplicity of the CD1 requirement for 25% EV charger-ready parking structures in new MUD and Commercial construction.** CD2's point system and the Affordable Housing exception create the potential us to not meet our objectives of enabling the transition to clean, fossil fuel-free transportation. Importantly, we must strive to enable the democratization of electric cars. Our less economically-advantaged residents will benefit from EVs as much as everyone else. The exception raised in CD2 systematically reducing their access. Please keep it simple and adopt a '% of parking' approach, one that has been used in many cities.
- **Remove the option for Level 3/DC Fast Charging in multi-unit residential projects.** Residential parking is not an ideal use case for Fast Charging. It will result in poor utilization – fully charged cars that are plugged in unnecessarily for long periods. Importantly, the equipment and installation cost of a Level 3 charging station can cover that of several Level 2 charging stations. Level 2 stations are more appropriate for the longer dwell times that you'll find in residential situations.

Hawaii is a fossil-fuel hungry state and we're generating emissions that are contributing to the climate crisis. The consequences that are affecting us now – rising seas are threatening our coastal areas; record heat is challenging our health; droughts are contributing to wildfires; and storms are getting stronger and wetter.

Bill 25 will help us reduce our emissions and contribute to a livable Hawaii for future generations. Please pass it.

Thank you for allowing me to testify.

Noel Morin

  
President  
Hawaii Electric Vehicle Association

*The Hawaii Electric Vehicle Association is a chapter of the Electric Auto Association ([electricauto.org](http://electricauto.org)), a national organization dedicated to increasing adoption of electric vehicles. The Hawaii Electric Vehicle Association is represented by electric vehicle owners and advocates across the state.*

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<sup>5</sup> See EverCharge.net for details and examples.



# Hawai'i Energy

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Council of the City and County of Honolulu  
City Hall, 530 South King Street  
Honolulu, Hawai'i 96813

**Committee on Zoning, Planning and Housing  
Testimony in Support of Bill 25 (2019) - Relating to the Adoption of the State Energy  
Conservation Code  
February 27, 2020, 9:00 AM Hearing**

Dear Chair Menor, Vice Chair Waters and Members of the Committee on Zoning, Planning and Housing:

Thank you for the opportunity to submit comments on Bill 25, Relating to the Adoption of the State Energy Conservation Code. The Hawai'i Energy program would like to testify in **strong support** for this item.

Hawai'i Energy works on behalf of the Hawai'i Public Utilities Commission (PUC) to empower island families and businesses to make smart energy choices to reduce energy consumption, save money, and pursue a clean energy future. We believe the new energy codes are critical in this effort and part of a global movement to make progress on climate change mitigation through codes and standards.

**Energy efficiency remains the cheapest, cleanest energy resource today.** The amended IECC 2015 will provide healthy and safe indoor environments while providing substantial bill savings for occupants over the life of the building, promote greater energy resilience and help Hawai'i reach our statewide commitment to reach 100% clean energy by 2045. In general, any building code is designed and reviewed for efficiency with cost-effectiveness in mind. Moreover, the Hawai'i amendments were carefully developed with the input of many agencies, organizations and the design and construction industry to minimize unintended consequences such as increased construction, materials and labor costs – while assuring occupants the benefits of high performance buildings that consume less electricity.

**Electric vehicle charging infrastructure requirements**

EV-readiness is a way to future-proof O'ahu's homes and buildings to be able to accommodate the expected growth in electric vehicles in the next 10-25 years. According to global research consulting firms McKinsey & Company and the Bloomberg New Economy Forum, electric vehicles are expected to reach cost parity with internal combustion engine (ICE) vehicles in the early 2020s. Policymakers have an important role in supporting market transformation in this area.

Hawai'i Energy therefore supports the amendments requiring basic electric vehicle infrastructure, recognizing the sizable cost advantage, **between four to eight times less expensive**, of having EV-ready capacity at the time of construction.

However, Hawai'i Energy also sees missed opportunity by not requiring Level 2 charging infrastructure. As EV adoption increases, Act 142 which was signed by the governor last year provides rebates for Level 2 EV chargers as well as Level 3. Level 2 charging is emphasized because it significantly increases the ability of our grid to absorb solar generation throughout the day as opposed to Level 1 charging, and additional offers convenience in faster charging times. This will ease the path toward electric vehicle adoption by reducing the cost to install post-construction and help realize the associated electrical grid and clean energy benefits. With the average residential building having a fifty year lifespan, the buildings being built today will have measurable impact on future generations.

**Hawai'i Energy will be assisting with EV charging infrastructure for affordable housing**

We support the bill's efforts particularly in the affordable housing sector, so that more people can participate in Hawaii's clean transportation future. With CD2 giving affordable housing projects a 4-year exemption, **Hawai'i Energy is looking to fill that gap with a new bonus rebate for EV charging installations at affordable housing projects for 80% AMI.** In addition to the rebates provided through Act 142, Hawai'i Energy is developing a program to cover 100% of the cost, to a limit, for EV charging stations installed at affordable housing developments. This is a pilot program that we're currently finalizing the qualifications and requirements and looking to roll out in the next few weeks. Our intention is to create opportunities for the affordable sector by incentivizing the installation of EV chargers, and if successful, our program can prime the market so more affordable projects will be receptive to being EV-ready going forward.

**Substantial benefits to taxpayers from the fully implemented code**

Blue Planet Foundation, based on data provided by the Hawai'i State Energy Office, estimates that over the next 20 years, O'ahu will save over **\$971,000,000** through the implementation of the 2015 code and the amendments in the subject Bill. This is money that can stay in the local economy rather than being used for fossil energy or imported renewable infrastructure.

The sensible energy code amendments in the proposed Building Energy Conservation Code of the City and County of Honolulu represent a critical opportunity for O'ahu to make a leap forward in the transition to 100% clean energy and will provide lasting economic benefits to residents and businesses who are already burdened with high costs. We encourage the Committee to pass the adoption of these provisions.

Thank you for the opportunity to testify. If you have any questions on Hawai'i Energy's programs or our work toward the adoption of stronger energy codes, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'Brian Kealoha', with a long horizontal flourish extending to the right.

Brian Kealoha  
Executive Director

February 25, 2020

The Honorable Ron Menor, Chair, and Members  
Committee on Zoning, Planning and Housing  
Honolulu City Council  
530 South King Street, Room 202  
Honolulu, Hawai'i 96813

**SUBJECT: Testimony Supporting Bill 25 (2020)**

Dear Chair Menor and Committee Members:

On behalf of the Natural Resources Defense Council (NRDC) and NRDC Action Fund, which have over 3 million members and activists, nearly 7,500 of whom are residents of Honolulu, I am writing to urge you to support Bill 25 (2020), as amended by Councilmember Elefante, which updates Honolulu's outdated energy code for new construction.

Bill 25 has the potential to cut energy bills by up to 65 percent for Honolulu renters and homeowners, and will help put Hawai'i on the path to 100 percent clean energy. These efficiency updates will be more affordable over the long term for residents, make homes more efficient and healthier, and help reduce island-wide climate pollution so the City can meet its ambitious goals to help solve the climate crisis.

Bill 25 will also give O'ahu residents access to: energy-efficient new homes so residents save money on utility bills; home water heating that uses O'ahu's abundant solar energy instead of fossil fuels; more electric vehicle (EV) charging capacity at homes and businesses; more capacity for solar panels on the roofs of new homes; and more flexibility for builders to use super-efficient tropical building standards.

**Energy Code Updates: Meeting Honolulu's Climate Goals, Helping Residents Save Money**

Cities and counties across the country are on the front lines of both the impacts and solutions to the climate crisis. Building codes are a simple, powerful tool cities are now using to accelerate the transition to a clean energy economy and meet the emissions reductions goals set forth in the Paris climate agreement and adopted by Hawai'i and Honolulu. The proposed amendments up for adoption by the City Council will protect residents from being stuck with higher energy and maintenance costs year after year. They will also close a long-standing loophole around solar hot water heating, help homeowners easily install rooftop solar panels by requiring new homes to be "photovoltaic (PV)-ready," and support the growing adoption of electric vehicles. The proposed amendments will also create significant island-wide benefits in the form of new jobs and cleaner air.

Among the many benefits associated with the proposed code update, Bill 25 will: cut energy bills up to 65% going forward; help Honolulu achieve its climate goals; get O'ahu buildings EV-ready at a stage when it is 4-8 times cheaper (at new construction); expand local clean energy jobs (Hawaii already has four times more jobs in clean energy than in fossil fuels); reduce the need for imported oil; and improve indoor and outdoor air quality.

### **Energy Code Updates Save Residents Energy**

Honolulu's current energy code has not been revised since 2006; it is 14 years out of date. Ongoing code updates help residents save energy and reduce energy costs and emissions. Bill 25 is critical to reduce long-term costs for residents, with more efficient buildings that reduce energy bills and give more people access to savings that come from solar energy and EVs. A six-year-old home constructed to the 2015 International Energy Conservation Code would use approximately 25% less energy than a house built under the current (2006) code.

### **Solar Hot Water Heating is Cost Efficient and Environmentally Friendly**

Solar hot water systems would allow residents to take full advantage of O'ahu's abundant sunshine. Hawaii has plenty of solar energy available at very low cost, and electric and natural gas prices are among the highest in the United States.<sup>1</sup> Increasing adoption of solar for all uses helps to reduce O'ahu's high use of imported oil, which has historically led to Hawaii being the state with the highest U.S. retail power prices. This will help build local energy resilience and self-sufficiency. Solar hot water heating will help reduce the 9% of O'ahu's carbon emissions that come from residential energy use and is a critical element to meet the City's commitment of 100% renewable energy by 2045.<sup>2</sup>

With the hot water heater loophole closed, residents could expect to avoid the equivalent of 26 -47 barrels of imported oil and save between \$4,200 and \$8,800 over a typical water heater lifetime (15 years). This translates to about \$1 billion in environmental and cost savings for O'ahu's economy at large, according to modeling done for the City by The Greenlink Group.

### **EV-Readiness Accelerates Clean Transportation, Lowers Charging Costs, and Provides Greater Access**

O'ahu has among the highest take-up rates of electric vehicles (EVs) across the United States, but existing building infrastructure does not support this growing use and demand. With the use of EVs expected to rise to over 22,000 by 2030, homes and businesses need to support the transition to clean electric vehicles. Acting later to retrofit O'ahu's parking spaces with charging stations would be far more costly than

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<sup>1</sup> Energy Information Administration.

[https://www.eia.gov/dnav/ng/ng\\_pri\\_sum\\_a\\_EPG0\\_PRS\\_DMcf\\_m.htm](https://www.eia.gov/dnav/ng/ng_pri_sum_a_EPG0_PRS_DMcf_m.htm).

<sup>2</sup> Honolulu Annual Sustainability Report, 2019,

[https://www.honolulu.gov/rep/site/ccsr/City\\_and\\_County\\_of\\_Honolulu\\_Annual\\_Sustainability\\_Report\\_2019.pdf](https://www.honolulu.gov/rep/site/ccsr/City_and_County_of_Honolulu_Annual_Sustainability_Report_2019.pdf).

requiring EV readiness up front. Acting now is also far less expensive than failing to act to address climate change impacts, which O'ahu residents are already experiencing.

Multiple studies nationally have found that the avoided cost associated with requiring new -construction to be EV-ready ranges from \$2,000 to \$5,000 per parking space.<sup>3</sup> Building in EV readiness avoids those costs. With proposed amendments to Bill 25 requiring EV-readiness, these avoided costs will total from \$1.4 million to \$3.4 million, and developers, homeowners, and renters will all benefit.

EV-readiness in new construction is an essential ingredient to support the City's commitment to transform all ground transportation to renewable fuels by 2045. On-road transportation accounts for 21% of O'ahu's polluting carbon emissions.<sup>4</sup> EVs are expected to reach cost parity with gas-powered cars in the early 2020s—and today, used EVs are very affordable. Already, Honolulu has the 8th highest EV market share in the nation, and Hawai'i has the 2nd highest EV adoption rate per capita in the country.<sup>5</sup> Honolulu must get its infrastructure ready to meet that demand.

### **Bill 25 is Affordable**

Bill 25 will improve long-term housing affordability for Honolulu residents and tenants. While it would add about \$300 to \$2,700 dollars to the average cost of new construction—less than 1 percent of the median condo price, or half a percent of the median single-family home price—this initial investment will more than pay for itself over time through utility bill savings and, in the case of EVs, through avoided gasoline purchases.<sup>6</sup> Assuming a 30-year mortgage, the average up-front cost would translate to approximately \$8/month, and utility bill savings are expected to be approximately \$53/month.<sup>7</sup> **Overall, this totals a \$45/month savings.**

Plus, newly proposed parking reforms also under City Council consideration (Bill 2) will give developers even more flexibility to save money on parking construction costs for homes and EV readiness. Being able to build less parking will more than offset the

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<sup>3</sup> <https://www.documents.dgs.ca.gov/bsc/2015TriCycle/CAC/Green/Exhibit-B-CARB-Cost-Analysis-and-Technical-Report.pdf>; <http://evchargingpros.com/wp-content/uploads/2017/04/City-of-SF-PEV-Infrastructure-Cost-Effectiveness-Report-2016.pdf>; <https://energy-solution.com/wp-content/uploads/2016/09/PEV-Infrastructure-Cost-Effectiveness-Summary-Report-2016-07-20b.pdf>

<sup>4</sup> Honolulu Sustainability Report, 2019, [https://www.honolulu.gov/rep/site/ccsr/City\\_and\\_County\\_of\\_Honolulu\\_Annual\\_Sustainability\\_Report\\_2019.pdf](https://www.honolulu.gov/rep/site/ccsr/City_and_County_of_Honolulu_Annual_Sustainability_Report_2019.pdf).

<sup>5</sup> <https://www.bizjournals.com/pacific/news/2018/11/16/honolulu-among-top-10-electric-vehicle-markets-in.html>

<sup>6</sup> Up-front cost estimates: Department of Planning and Permitting, *Bill 25 (2019)*. Median home prices: Locations Hawaii, "Oahu Real Estate Report," December 2019. <https://www.locationshawaii.com/learn/market-reports/oahu-real-estate-report/>

<sup>7</sup> This assumes 33% reduction on the average residential household electric bill; City estimates of savings are 33-65%. (see ref. 6)

relatively small costs associated with Bill 25; each parking space in Honolulu currently costs an average of \$25,000 to \$48,000 to build.<sup>8</sup>

### **Honolulu residents support Bill 25**

Honolulu voters want action on climate change. Over 74 percent of O'ahu residents support building codes that include energy efficiency, solar hot water heating, and EV charging, even if they cost more up front but result in lower energy bills, according to a 2019 public opinion poll.<sup>9</sup>

To protect and promote the health, safety, resiliency, and economic prosperity of Honolulu and its residents, we urge you to support Bill 25 (2020).

Thank you for the opportunity to submit these comments.

Sincerely,

A handwritten signature in cursive script, appearing to read "Maria Stamas".

Maria Stamas, Esq.

Buildings Strategist, American Cities Climate Challenge

Natural Resources Defense Council / NRDC Action Fund

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<sup>8</sup> Kathleen Rooney and Donald Shoup, "There's No Such Thing As Free Parking," *Honolulu Civil Beat*, December 9, 2019. <https://www.civilbeat.org/2019/12/theres-no-such-thing-as-free-parking/>

<sup>9</sup> Nathan Eagle, "Poll: Oahu Voters Want Action On Climate Change," *Honolulu Civil Beat*, November 25, 2019. <https://www.civilbeat.org/2019/11/poll-oahu-voters-want-action-on-climate-change/>

LOCAL #1 HI, IUBAC



## International Union of Bricklayers and Allied Craftworkers Local #1 of Hawaii

2251 North School Street, Honolulu, HI 96819

Phone: (808) 841-8822 • Fax: (808) 777-3456

February 25, 2020

The Honorable Ron Menor, Chair  
The Honorable Tommy Waters, Vice Chair  
Committee on Zoning, Planning and Housing  
530 South King Street, Room 200, Honolulu, Hawai'i 96813

### **Statement of Local 1 in Support of Bill 25, Proposed CD2**

Dear Chair Menor, Vice Chair Waters, and Members:

The International Union of Bricklayers and Allied Crafts, Local 1, appreciates your diligent work on Bill 25 thus far.

**We support the Proposed CD2 for Bill 25**, to the extent that it includes amendments that will help the code to be best tailored to Hawaii's unique tropical climate and help consumers and builders alike achieve energy efficiency and cost savings.

Specifically, we appreciate the amendments made to Subsection C402.2.3 of the code, found in Paragraph (12) on Page 5 of the Proposed CD2. We are pleased that these amendments have come with supportive input from various stakeholders, including our members and signatory contractors who perform work relating to concrete, brick, tile, stone, marble, terrazzo, cement, and plaster.

In closing, we thank you in advance for your favorable consideration of the Proposed CD2, and look forward to your continued support of the hardworking men and women in Hawaii's construction trades.

---

**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 3:09 PM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name IAN TIERNEY  
Phone 8089497770  
Email itierney@kya.design  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item Bill 25 (CD2) Elefante  
Your position on the matter Support  
Representing Organization  
Organization KYA Design Group  
Do you wish to speak at the hearing? No

Aloha Chair Menor and members of the committee,

Written  
Testimony

We are a Hawaii based Architectural firm established in 1972 in Honolulu. We have been able to work on some great projects over the years. There are numerous projects on Oahu that have gone above and beyond code and can serve as examples to learn from. Our project, the UH West Oahu Admin Health Sciences Building completed in 2018 was prewired for EV Charging and solar PV. The project was completed on time, and on budget. Now the owner is using the contingency funds to install the EV Charger, and solar PV system. It goes to show, you can still build green and stay within budget. You may contact us at info@kya.design for more info or any questions. Mahalo.

Testimony  
Attachment

Accept Terms and Agreement 1

IP: 192.168.200.67

# MASONRY INSTITUTE OF HAWAII, INC.

95-1030 MEHEULA PARKWAY #892711 · MILILANI HI 96789 · (808)295-7064 · Fax (808) 888-6662

February 25, 2020

HONOLULU CITY COUNCIL  
Committee on Zoning, Planning and Housing  
City Council Committee Meeting Room  
Honolulu, Hawaii 96813

DATE: Thursday, February 27, 2020

TIME: 9:00 a.m.

TESTIMONY ON BILL NO. 25 (2019) – Relating to the Adoption of the State Energy Code

To Council Chair Menor, Vice Chair Waters and members of the Committee on Zoning, Planning and Housing:

The Masonry Institute of Hawaii (MIH), represents the Masonry Industry here in Hawaii.

Mahalo for the opportunity to testify. MIH supports Bill No. 25 CD2, as introduced by Councilmember Elefante, this version of Bill 25 includes concrete masonry and concrete walls in the building code. The sustainability and safety benefits of mass wall construction are recognized in the revisions of the State Building Codes, including these revisions will create codes that are tailored to Hawaii's unique climate, resulting in greater energy efficiency, fire safety and cost savings.

With respect,

Masonry Institute of Hawaii



# SHIFTED ENERGY.

643 Ilalo St #203, Honolulu, HI 96813

Telephone: +1.808.664.0053 | Email: [info@ShiftedEnergy.com](mailto:info@ShiftedEnergy.com)

## *Zoning, Planning and Housing committee*

*REGULAR MEETING COMMITTEE MEETING ROOM THURSDAY, February 27, 2020, 10:00 A.M.*

February 27, 2020

### *Shifted Energy Supports Bill 25 Relating to the adoption of the State Energy Conservation Code*

Aloha Chair Menor, Vice-Chair Waters and members of the Zoning, Planning and Housing Committee:

Thank you for the opportunity to submit testimony in **strong support** of Bill 25. The inclusion of grid-interactive water heater requirements within the Solar Water Heating mandate, in alignment with the International Energy Conservation Code, provides an important tool to enable Hawai'i to meet its renewable energy goals while ensuring that all ratepayers benefit from the realization of those goals.

Shifted Energy was founded in Hawai'i in 2014 from the energy efficiency and energy justice activities of non-profit Kanu Hawai'i. During our community engagement and outreach activities, we identified two key lessons that are relevant to the Council's current deliberations:

- 1) Low and moderate-income families, multi-family dwelling residents, and renters are often not able to take advantage of emerging technologies, such as rooftop solar and home battery systems, that would reduce their electric bills and allow them to support renewable energy deployment; and
- 2) Electric water heating is the predominant form of water heating and makes up a disproportionately large percentage of many Hawai'i residents' electric bills.

Shifted Energy was incubated out of Kanu Hawaii with the goal of engaging hard-to-reach communities in the renewable energy transformation through the utilization of their electric water heaters. We currently employ 6 people on Oahu, have just hired a new engineering graduate who we connected with through HTDC, and look forward to continuing building our company in Hawaii in support of local innovation and job creation.

To understand the concept of 'grid-interactive water heating', it is important to first understand that Hawaii's 100% renewable energy generation portfolio mandate is requiring Hawaiian Electric to integrate increasing amounts of intermittent renewable energy. The intermittent nature of renewable energy generation means that 1) electricity production is not always aligned with customer demand, and 2) there are often rapid fluctuations in generation as clouds pass overhead. So as Hawaiian Electric adds more renewable generation to Oahu's electricity system, they must also:

- 1) Add ways to store solar energy for delivery later in the day;
- 2) 'Smooth' the rapid fluctuations to maintain the stability of the power grid; and
- 3) Reduce total electricity demand during periods when renewable generation is not high (e.g., during the night) through energy efficiency or demand *shifting*.

As the Council is likely aware, grid-scale and customer-sited energy storage batteries are able to provide all of the above services and Hawaiian Electric is actively procuring solar and energy storage projects to do just that. But these batteries typically utilize lithium-ion chemistry, which is currently fairly expensive (preventing many homeowners from being able to purchase them) and present safety issues that make procurement, permitting, and deployment a challenge. Safe, inexpensive alternatives would enable rapid scaling of energy storage technology and in the integration of renewables.

#### Enter Grid-Interactive Water Heating.

Water heater tanks are essentially large cylinders that store *thermal* energy, and there are hundreds of thousands of them across Oahu. Shifted Energy has developed an inexpensive, non-intrusive control device that can be attached to any electric water heater to convert it into a customer-sited battery. When deployed for apartment or condominium renters and owners, Shifted's controllers essentially transform the entire building into a giant battery simply by upgrading existing electric water heater assets. These batteries will then respond to control signals from Hawaiian Electric to support grid stability and renewable integration. Hawaiian Electric then compensates the host customer for the 'grid support services' that those water heaters provide and Shifted's intelligent software ensures that families always have hot water when they need it.

Because so many families already have such water heaters and the cost of the controller is low, including grid-interactive water heating in Bill 25 and the City and County electric codes ensures that hard-to-reach families can finally participate in and benefit from the clean energy revolution and Oahu can rapidly scale a cost-effective technology to support safe, low-cost renewable energy integration.

For the foregoing reasons, Shifted Energy **strongly supports** this measure.

Mahalo,

Forest Frizzell, CEO  
Shifted Energy

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 8:34 PM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Joseph Kohn MD  
Phone 8083596605  
Email joseph@WeAreOne.cc  
Meeting Date 02-27-2020  
Council/PH Zoning  
Committee  
Agenda Item 11  
Your position on the Support  
matter  
Representing Organization  
Organization We Are One, Inc. - www.WeAreOne.cc - WAO  
Do you wish to  
speak at the No  
hearing?

Written Testimony Bill 25 is a meager measure. It is a baby step toward fighting climate change. It should be far stronger. How will the world ever reverse our climate breakdown when passing even such a timid bill takes so much time, energy, and patience?

www.WeAreOne.cc

Testimony  
Attachment  
Accept Terms and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 9:17 AM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name	TOM DIGRAZIA
Phone	8082620770
Email	digraziat001@gmail.com
Meeting Date	02-27-2020
Council/PH Committee	Zoning
Agenda Item	Bill 25
Your position on the matter	Support
Representing	Self
Organization	YOGAKAILUA.COM
Do you wish to speak at the hearing?	Yes
Written Testimony	There is overwhelming support for this Bill as one way our City can take more responsibility for mitigating adverse climate events.
Testimony Attachment	
Accept Terms and Agreement	1

IP: 192.168.200.67



**COMMITTEE ON ZONING, PLANNING AND HOUSING**

**Honolulu City Council**

February 27, 2020, 9:00 AM

**TESTIMONY IN SUPPORT OF BILL 25 CD2 (Elefante)  
Relating to the Adoption of the State Energy Conservation Code**

Aloha Chair Menor, Vice Chair Waters, Members of the Honolulu City Council Committee on Zoning, Planning and Housing,

My name is Jun Shin. I am a Sophomore at the University of Hawai'i at Mānoa. I currently serve as the Environmental Justice Action Committee Chair for the Young Progressives Demanding Action (YPDA). YPDA advocates for public policies that reflect the values of young people throughout the State of Hawai'i. YPDA is in **support** of **Bill 25 CD2 (Elefante)**, Relating to the Adoption of the State Energy Conservation Code.

Experts continue to come out with reports such as the Fourth National Climate Assessment and the United Nations Intergovernmental Panel on Climate Change (IPCC) reports discussing the existential threat of climate change, the negative impacts it will have on our society, economy, and our natural resources, while highlighting the need for immediate action by our leaders.

There is a lot of work that needs to be done to effectively combat climate change, but Bill 25 is a great step in the right direction. Solar energy heating our water, building at least 25% of infrastructure needed for EV (Electrical Vehicle) readiness, and just making sure O'ahu's buildings are efficient as possible in how it uses energy is an important step in helping us to reach our goal of 100% renewable energy.

However as an organization whose membership and leadership consists of Millennials and younger, we know that meaningful progress is when both working people and the environment thrive hand in hand in a state where families live paycheck to paycheck and young people are moving away because they can't afford a decent standard of living. Bill 25 has the potential to help working families while protecting our environment. Being efficient with energy usage such as using solar instead of gas to heat water will help in reducing monthly electric bills, unloading at

least some of the burden off of both those who own homes, as well as those who are renting their homes. This is an issue of economic justice, as well as an environmental issue. For a livable and equitable Hawai'i future for all, it is important that this committee, and eventually the full City Council passes the strongest version of this measure.

Please protect Hawai'i's, and work to preserve it for the benefit of future generations. We look forward to continuing to work with the City to take proper action on climate change. Young Progressives Demanding Action respectfully asks for the committee to **support Bill 25 CD2 (Elefante)** and that you please lead the way for future climate resilient policies, and further incorporation of climate resilience into everyday decisions made by our leaders.

Thank you for the opportunity to testify,

Jun Shin,  
Environmental Justice Action Committee Chair  
Young Progressives Demanding Action (YPDA)  
P.O. Box 11105  
Honolulu, HI 96828  
Cell: 808-255-6663  
Email: junshinbusiness729@gmail.com  
CC: action@ypdahawaii.org

# EAH



February 24, 2020

Chair Ron Menor, Vice Chair Waters and Members of the Honolulu City Council  
Committee on Zoning, Planning and Housing  
Honolulu Hale  
530 South King Street  
Honolulu, Hawaii 96813

Subject: Bill No. 25 (2019) Relating to the Adoption of the State Energy Conservation Code,  
Hearing at 9:00AM on January 27, 2020

Chair Menor, Vice-Chair Waters and members of the Committee:

EAH Housing has previously submitted testimony in opposition to Bill 25 specifically for its application to Low Income (80% AMI and below) housing, the increase in development costs and the inclusion of a requirement to have a portion of our parking include Electric Vehicle (EV) ready stalls. Electric vehicles are an expensive luxury item well outside the financial means of the residents we serve.

Since submitting our previous testimony on January 22, 2020, EAH and other affordable housing advocates have had a couple of meetings with the City's Office of Climate Change, Sustainability and Resiliency, Josh Stanbro and his staff. The purpose of the meetings was to gain a better understanding of each other's position with the hope of reaching some sort of compromise on the EV requirements in Bill 25.

I am happy to report that a compromise has been reached which I believe is acceptable to most of the advocates that participated in our meetings. But I am not speaking for the entire group here only for EAH. The compromise as I understand it is:

1. Reduce the EV requirement to 10% of parking stalls on new construction projects serving 80% AMI and below. Need clarification if 10% will need to include Handicap Accessible EV stall as well as this essentially takes up two regular side parking stalls.
2. Defer the implementation of Bill 25 on 80% AMI and below new construction projects for 3 years from the date the future ordinance is enacted. EAH would have preferred 5 years.
3. The Bill does not apply to existing 80% AMI and below projects.

Each side gives up something in a compromise and in this case, we are accepting a certain amount of increased costs to serve a population which we believe is a long way away from being able to afford an Electrical Vehicle. Our preference though has not changed and that is a complete exemption from Bill 25 and the Adoption of the State Energy Conservation Code for all housing at 80% AMI and below until our housing crisis is no longer a crisis. Developers need flexibility in order to build to serve the lower income levels where the need for affordable housing is the greatest. We need more incentives, exemptions, fee waivers, etc.. to get the job done! Thank you for allowing us to share our concern on this issue.

Sincerely,

Kevin R. Carney, RB-16444  
(PB), NAHP-E  
Vice President, Hawaii



## **HAWAII LABORERS-EMPLOYERS COOPERATION AND EDUCATION TRUST**

650 Iwilei Road, Suite 285 · Honolulu, HI 96817 · Phone: 808-845-3238 · Fax: 808-845-8300

**February 25, 2020**

**HONOLULU CITY COUNCIL**  
**Committee on Zoning, Planning and Housing**  
**City Council Committee Meeting Room**  
**Honolulu, Hawaii 96813**  
**DATE: Thursday, February 27, 2020**  
**TIME: 9:00 a.m.**

### **TESTIMONY ON BILL NO. 25 (2019) – Relating to the Adoption of the State Energy Code**

**To Council Chair Menor, Vice Chair Waters and members of the Committee on Zoning, Planning and Housing:**

Hawaii LECET is a labor-management partnership between the Hawaii Laborers' International Union of North America, Local 368, its' 5000+ members and its' 250+ unionized contractors. The Laborers' International Union of North America is the largest construction union in the United States.

Mahalo for the opportunity to testify. Hawaii LECET supports Bill No. 25 CD2, as introduced by Councilmember Elefante, as this version of Bill 25 includes concrete masonry and concrete walls in the building code. The sustainability and safety benefits of mass wall construction are recognized in the revisions of the State Building Codes, and including these revisions will create codes that are tailored to Hawaii's unique climate, resulting in greater energy efficiency, fire safety and cost savings.

With respect,

Hawaii Laborers-Employers Cooperation & Education Trust



# LIUNA!

## HAWAII LABORERS UNION (LIUNA) LOCAL 368

**PETER A. GANABAN**  
*Business Manager/  
Secretary-Treasurer*

**ALFONSO OLIVER**  
*President*

**JOBY NORTH II**  
*Vice President*

**TONI FIGUEROA**  
*Recording Secretary*

**JAMES DRUMGOLD JR.**  
*Executive Board*

**ORLANDO PAESTE**  
*Executive Board*

**JOSEPH YAW**  
*Executive Board*

**MARTIN ARANAYDO**  
*Auditor*

**RUSSELL NAPIHA'A**  
*Auditor*

**MARK TRAVALINO**  
*Auditor*

**ALFRED HUFANA JR.**  
*Sergeant At Arms*

Hearing: Committee on Zoning and Housing  
Date: February 26, 2020  
Place: Committee Meeting Room  
Time: 9:00 a.m.

### RE: BILL 25 (2019), CD1 – RELATING TO THE ADOPTION OF THE STATE ENERGY CONSERVATION CODE

Aloha Chair Menor, Vice-Chair Waters, and committee members,

My name is Ryan K. Kobayashi, Government and Community Relations Director for the Hawaii Laborers Union Local 368. The Hawaii Laborers Union (LIUNA), Local 368 is made up of over 5000 working and retired members across the State of Hawaii and we would like to take this opportunity to offer comments regarding Bill 25 Relating to the Adoption of the State Energy Conservation Code.

Thank you for the opportunity to submit written testimony on this issue. At this time, the Hawaii Laborers' Union, Local 368 would like to express **our strong SUPPORT for the addition of masonry and concrete walls** to Hawaii Island's adoption of the State Energy Conservation Code. We feel that such an addition would not only improve the code in the areas of energy conservation and efficiency, but in the areas of fire safety and cost effectiveness in Honolulu.

However, we have serious concerns regarding the cost impacts of other items included in this Bill which could severely impact the production of affordable housing in the County. Therefore, we would suggest an exempting all housing that falls into a 140% AMI and below category to be consistent with the intent of Bills 58 and 59 which would seek to spur affordable for purchase and rental housing. We feel that a number less than the 140% could end up stifling or slowing the production of affordable housing, working counterproductively with respect to the above-mentioned Bills.

Thank you for the opportunity to submit written testimony on this matter.

LIUNA Local 368  
1617 Palama Street  
Honolulu, HI 96817  
Phone: (808) 841-5877  
Fax: (808) 847-7829  
[www.local368.org](http://www.local368.org)

## Feel the Power



February 26, 2020

The Honorable Ron Menor, Chair  
The Honorable Tommy Waters, Vice Chair  
Members of the Committee on Zoning Planning and Housing  
City Council, City and County of Honolulu  
Honolulu, Hawaii 96813-3077

RE: **Bill 25 (2019), CD2 (Elefante) – RELATING TO THE ENERGY CODE**

Aloha Chair Menor and Members of the Committee on Zoning, Planning and Housing,

Mahalo for the opportunity to submit testimony on behalf of D.R. Horton offering comments to the amendments proposed by the Office of Climate Change, Sustainability and Resiliency by way of Councilmember Elefante's proposed CD2 ("OCCSR's Proposed CD2"). Over the last 4 months, D.R. Horton has participated in working sessions with OCCSR, Hawaiian Electric Company ("HECO"), Hawaii Gas, industry and union leaders as well as other developers to learn, share and collaboratively work towards finding a practical and reasonable balance between sustainability and much needed affordable housing. While we have found agreement on language pertaining to solar water heating (Subsection R403.5.5) and solar conduit and electrical panel readiness (Subsection R404.2), there are two outstanding issues that must still be addressed relative to electric vehicle (EV) infrastructure. We respectfully submit the attached Exhibit A ("Stakeholders Proposed CD2"), which includes proposed amendments to the electrical vehicle readiness points-based compliance values and affordable housing exemptions currently offered in OCCSR's Proposed CD2.

While D.R. Horton absolutely agrees that it is critical for an island state like Hawaii to address and mitigate the impacts of climate change, we also believe that the lack of housing, particularly affordable housing, is another critical issue facing our State and hampering the ability for our local families to remain in Hawaii. Policy makers at all levels have recently identified the lack of affordable housing as a top priority needing our collective attention. Given this, we are concerned that the EV points system and very limited exemptions for affordable housing in OCCSR's Proposed CD2 will have an adverse impact on our already fragile housing market.

Oahu • Maui • Hawaii Island • Kauai

130 Merchant Street, Suite 112 • Honolulu, Hawaii 96813 • 808.521.5661

[www.drhorton.com/hawaii](http://www.drhorton.com/hawaii)

Hawaii's families need affordable and attainable housing today. Accordingly, we strongly urge the Chair and the members of this committee to adopt the amendments set forth in Exhibit A, which strike a balance between sustainability for the future and housing affordability today.

**There are two remaining issues with OCCSR's Proposed CD2:**

**1. Subsection C406.8 Electric vehicle infrastructure:**

*Problem #1: OCCSR's Increasing Minimum Requirements.*

OCCSR's original Bill 25, Proposed CD1 established a minimum baseline EV charging requirement set at Level 1 charging. Level 1 charging = 3.5 miles/hour charge. OCCSR's Proposed CD2 eliminated Level 1 and Level 2, 16A charging and increased the minimum charging requirement to Level 2, 32A. Level 2, 32A charging = 23.5 miles/hour charge. This represents a 5.7X or 570% increase. This is unacceptable.

*Proposed Stakeholder Solution: **Add back in AC Level 2, 16A Charging for Enclosed Attached Garages Only.***

Both HECO and developers agree that AC Level 2, 16A charging is appropriate for townhomes with enclosed attached garages where a homeowner will pull into his/her garage, plug in and charge overnight. Per HECO, it charges at a speed of 11.6 miles/hour = 92.8 miles/8 hours overnight, more than adequate for the average EV car.

It should be noted that HECO believes there remains a need for Level 1 charging. However, we are willing to forego Level 1 charging in a good faith effort to reach a compromise.

*Problem #2: OCCSR's Proposed CD2 Table C406.8.2 EV Readiness Points-Based Compliance Values are inequitable.*

OCCSR's Proposed CD2 point values are inequitable and do not align with OCCSR's original Bill 25, Proposed CD1 established minimum baseline EV charging requirement set at Level 1 charging. It is a veiled increase that raises the baseline requirement by 2.5X or 250%. Again, this is unacceptable. Here is an example:

A hypothetical 120-unit multi-family project that has 240 parking stalls will be required to provide 25% x 240 parking stalls = 60 dedicated EV ready parking stalls or 60 EV compliance points. The Total Vehicles Charged (# of cars able to charge) within an 8-hour period = 60 (1 car per stall based on OCCSR's Proposed CD1 baseline requirement).

Using the same hypothetical 120-unit multi-family project, the Stakeholder's Proposed CD2 Point Table for Level 2, 32A EV Ready Common Area Stalls will require:

EV Ready Parking Stalls = 12 common stalls  
Total Vehicles Charged within same 8-hour period = 60 (assuming 5 cars per stall charge equivalent to OCCSR's Proposed CD1 baseline requirement allowing 15-minute car transitions.)

While OCCSR's Proposed CD2 Point Table for Level 2, 32A EV Ready Common Area Stalls will require:

Parking Stalls = 30 common area stalls  
Total Vehicles Charged within 8-hour period = 150 (this is a 2.5X or 250% increase over OCCSR's Proposed CD1 baseline requirement of 60.

***Proposed Stakeholder Solution: Approve the Stakeholder's Proposed CD2 Table C406.8.2 in Exhibit A.***

The Stakeholder's Proposed CD2 Table C406.8.2 provides an equitable point value system that will yield the equivalent Total Vehicles Charged to OCCSR's original Proposed CD1 baseline requirement. EV point values should be structured to meet the baseline CD1 intent of Bill 25. It should not be a veiled attempt to demand above and beyond.

Additionally, Stakeholders have proposed two compromises in point values in a good faith effort to find a middle ground (see Exhibit B). We have reduced our point values in half and we then further reduced point values for DC Level 3 charging. OCCSR has not offered any compromises in point values.

**2. Subsection C406.8 Electric vehicle infrastructure as it relates to affordable housing:**

***Problem #1: OCCSR's Proposed CD2 minimizes exemptions for affordable housing projects from EV infrastructure requirements.***

Bill 25's EV requirements will add between \$1,400 - \$4,500 per unit to affordable housing (see Exhibit C) jeopardizing available financing opportunities for affordable housing. In particular, Bill 25's cost increases will magnify the difficulty of financing affordable rental housing projects between 80% to 140% AMI where government grants, loans and financing mechanisms, such as LIHTC, are not available to these strata of housing developments. Households earning between 80% to 140% AMI are the backbone of our community: teachers, first responders, City and State employees, nurses, etc. Any increase in cost will reduce project margins below 6%, gravely affecting the ability to market a viable project in an already fragile and limited lending environment.

OCCSR's Proposed CD2 reduces the EV requirement for affordable projects for households earning more than 80% AMI and up to 140% AMI from 25% of parking stalls to 20%. Affordable projects for households earning 80% AMI and below, the EV requirement is 10% of parking stalls. These exemptions are simply not enough.

*Problem #2: OCCSR's Proposed CD2 affordable housing exemptions only applies to Subsection C406.8.1 Baseline percentage EV readiness compliance path. It does not apply to Subsection C406.8.2 Point-based EV readiness compliance path.*

I am assuming this is an oversight as exemptions should apply across both compliance pathways.

*Proposed Stakeholder Solution: Provide a full exemption from EV Requirements for affordable units for households earning between 80% and 140% AMI for both Section C406.8.1 Baseline percentage electric vehicle readiness compliance path and Section C406.8.2 Points-based electric vehicle readiness compliance path.*

Without this full exemption, Bill 25 cost increases will negate the affordable housing policies very recently passed by the Council in Bill 59, providing qualified projects with cost off-sets to ensure that units get built. Qualified projects are in the planning phase and will takes at least 5 years to be completed. Given this, an exemption will allow qualified affordable projects a chance to benefit from Bill 59's good policy and build more much needed rental housing.

On a final note, kindly allow be to share the overarching increased cost implications that Bill 25, OCCSR's Proposed CD2 will have on today's buyer demographic at Hoopili. Hoopili is a large master planned community in East Kapolei selling multi-family and single family homes to affordable buyers, first time home buyers and first time move up buyers. In September 2019, D.R. Horton analyzed a sampling of 40 homebuyer loan capacities. Of the 40 loans, 28 were conventional loans and 12 were Fair Housing Act ("FHA") loans. The average debt-to-income ratio of this sampling was 42-44%, anything higher would result in loan disqualification. The estimated cost increase that Bill 25, OCCSR's Proposed CD2 is projected to create ranges from \$1,900 to \$9,402 unit. Add that to the \$2,305 to \$9,300 per unit projected cost ranges that the adopted 2012 International Energy Conservation and State Energy Conservation Code have already created, we are facing a potential compounded energy cost increase of \$4,205 to \$18,702 per unit. (see Exhibit C). Any slight increase in monthly mortgage payments under these loans would result in disqualifying 11 of the 28 conventional loan buyers and 8 of the 12 FHA loan buyers. In short, if Bill 25, OCCSR's Proposed CD2 were in effect in September 2019, 48% of buyers seeking a loan to purchase a home in Hoopili would NOT have qualified for a mortgage.

The Honorable Ron Menor, Chair  
The Honorable Tommy Waters, Vice Chair  
February 26, 2020  
Page 5

In summary, based on our remaining concerns set forth above, together with our belief that the Council would want to balance both our sustainability and housing challenges, D.R. Horton strongly urges you to adopt the amendments attached as Exhibit A.

Mahalo for your time and consideration. It is very much appreciated. Should you have any questions, please do not hesitate to contact me at #782-4109 or [ttonaki@drhorton.com](mailto:ttonaki@drhorton.com).

Sincerely,

A handwritten signature in black ink, appearing to read 'Tracy' followed by a stylized surname.

Tracy Tonaki  
Senior Vice President



**CITY COUNCIL**  
CITY AND COUNTY OF HONOLULU  
HONOLULU, HAWAII

ORDINANCE \_\_\_\_\_

BILL **25 (2019), CD2 (Draft)**

**A BILL FOR AN ORDINANCE**

RELATING TO THE ADOPTION OF THE STATE ENERGY CONSERVATION CODE.

BE IT ORDAINED by the People of the City and County of Honolulu:

SECTION 1. Purpose. The purpose of this ordinance is to regulate the design and construction of residential and commercial buildings for the effective use of energy through the adoption of the State Energy Conservation Code (2017), subject to the local amendments herein.

SECTION 2. Chapter 32, Revised Ordinances of Honolulu 1990 ("Building Energy Conservation Code") is repealed.

SECTION 3. The Revised Ordinances of Honolulu 1990 is amended by adding a new Chapter 32 to read as follows:

**"Chapter 32**

**BUILDING ENERGY CONSERVATION CODE**

**Article 1. Building Energy Conservation Code**

**Sec. 32-1/1 Adoption of the State Energy Conservation Code.**

The State Energy Conservation Code (SECC), as adopted by the State of Hawaii on February 14, 2017, which adopts, with modifications, the International Energy Conservation Code, 2015 edition (IECC), as copyrighted by the International Code Council, is adopted by reference and made a part hereof, subject to the following amendments, which, unless stated otherwise, are in the form of amendments to the IECC 2015 edition:

- (1) Amending Section 3-181.1-6. Section C101.1 is amended to read:

**C101.1 Title**

This code shall be known as the Building Energy Conservation Code (BECC) of the City and County of Honolulu (CCH) or the CCH BECC referred to herein as "this code."

- (2) Amending Section C103.1. Section C103.1 is amended to read:

**C103.1 General.** When the requirements in this Code apply to a building as specified in Section C101.4, plans, specifications or other construction documents submitted for a building, electrical or plumbing permit required by the jurisdiction must comply with this code and will be prepared, designed, approved



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and observed by a design professional. The responsible design professional shall provide on the plans a signed statement certifying that the project is in compliance with this code.

**Exception:** Any building, electrical or plumbing work that is not required to be prepared, designed, approved or observed by a licensed professional architect or engineer pursuant to Chapter 464, Hawaii Revised Statutes (HRS).

- (3) Amending Subsection C103.2. Subsection C103.2 is amended to read:

**C103.2. Information on construction documents.** Construction documents must be drawn to scale upon suitable material or submitted in an electronic form acceptable to the code official. Construction documents must be of sufficient clarity to indicate the location, nature and extent of work proposed and show, in sufficient detail, pertinent data and features of the building, systems and equipment as herein governed. Details must include, but are not limited to the following, as applicable:

1. Insulation materials and their thermal resistance (R-values);
2. Fenestration U-Factors and solar heat gain coefficients (SHOCs);
3. Area-weighted U-factor and SHGC calculations;
4. Mechanical system design criteria and power requirements;
5. Mechanical and service water heating system and equipment types, sizes and efficiencies;
6. Economizer description;
7. Equipment and system controls;
8. Fan motor horsepower (hp) and controls;
9. Duct sealing, duct and pipe insulation and location;
10. Lighting fixtures schedule with wattage and control narrative;
11. Location of daylight zones on floor plans; and
12. Air sealing details.



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All plans, reports, and documents must be certified by the project design professional or engineer, using the appropriate form shown below and submitted to the code official certifying that the plans and documents conform to the requirements of this code.

<b>CITY AND COUNTY OF HONOLULU REVISED ORDINANCE CHAPTER 32, HONOLULU COUNTY CODE 1990, AS AMENDED</b>	
To the best of my knowledge, this project's design substantially conforms to the Building Energy Conservation Code for:	
_____	Building Component Systems
_____	Electrical Component Systems
_____	Mechanical Component Systems
Signature: _____ Date: _____	
Name: _____	
Title: _____	
License No.: _____	

Include only those items that the signator is responsible for. This block shall be on the first sheet of the pertinent plan, e.g. architectural, electrical, and mechanical. The above may be submitted separately to the Building Official in a letter including the identification of the building.

- (4) Amending Subsection C104. Subsection C104 is amended to read:
- C104.2 Required inspections.** Inspections must comply with Chapter 16.
- (5) Amending Subsection C104.2.6. Subsection C104.2.6 is amended to read:
- C104.2.6 Final inspection.** The building must have a final inspection and cannot be occupied until approved. The final inspection must include verification of the installation of and proper operation of all required building controls, and documentation verifying activities associated with required building commissioning have been conducted and any findings of noncompliance corrected.
- (6) Amending Subsection C104.6. Subsection C104.6 is amended to read:
- C104.6 Re-inspection and testing.** Where any work or installation does not pass an initial test or inspection, the necessary corrections shall be made to achieve compliance with this code. The work or installation must then be resubmitted to the responsible code official for inspection and testing as required by this code.



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- (7) Amending Subsection C104.7. Subsection 104.7 is amended to read:

**C104.7 Approval.** After a building passes all tests and inspections required by this code, the responsible design professional must submit a confirmation letter to the code official certifying that the building has passed all of the tests and inspections required and stating that the building owner has received the Preliminary Commissioning Report, as required by IECC Section C408.2.4.

- (8) Amending Subsection C107.1. Subsection C107.1 is amended to read:

**C107.1 Fees.** Prescribed fees must comply with ROH Chapter 18.

- (9) Amending Subsection C108.1. Subsection C108.1 is amended to read:

**C108.1 Authority.** Stop work order must comply with ROH Chapter 18.

- (10) Amending Subsection C109.1. Subsection C109.1 is amended to read:

**C109.1 General.** Board of Appeals shall comply with Chapter 16 of the ROH 1990 (as amended).

- (11) Amending Section C202 of the IECC. Section C202 is amended by:

- (a) Amending the definition of "CODE OFFICIAL" to read:

**CODE OFFICIAL** means the Director of the Department of Planning and Permitting or the director's authorized representative.

- (b) Amending the definition of "DWELLING UNIT" to read:

**DWELLING UNIT** means a building or portion thereof that contains living facilities, including permanent provisions for living, sleeping, eating, cooking and sanitation, as required by this code, for not more than one family, or a congregate residence for 16 or fewer persons.

- (c) Adding the following definition of "RENEWABLE ENERGY" immediately before the definition of "REPAIR:"

**RENEWABLE ENERGY** by reference to HRS §269-91, renewable energy means energy generated or produced using the following sources:

1. Wind;
2. Sun;



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3. Falling water;
4. Biogas, including landfill and sewage-based digester gas;
5. Geothermal;
6. Ocean water, currents and waves, including ocean thermal energy conversion;
7. Biomass, including biomass crops, agricultural and animal residues and waste, and municipal solid waste and other solid waste;
8. Biofuels; and
9. Hydrogen produced from renewable energy sources.

(12) Amending Subsection C402.2.3. Subsection C402.2.3 is amended to read:

**C402.2.3 Thermal resistance of above-grade walls.** The minimum R-value of materials installed in the wall cavity between framing members and continuously on the wall shall be as specified in Table C402.1 .3, based on framing type and construction materials used in the Wall assembly.

**Exception:** Continuous insulation for wood and metal framed walls are not required when one of the following conditions are met:

1. Walls have a covering with a reflectance of equal to or greater than 0.64 and/or overhangs with a projection factor equal to or greater than 0.3;
2. Walls have overhangs with a projection factor equal to or greater than 0.3. The projection factor is the horizontal distance from the surface of the wall to the farthest mast point of the overhang divided by the vertical distance from the first floor level to the bottom-most point of the overhang; or
3. Concrete, Concrete masonry units (CMU), and similar mass walls are six inches or greater in thickness.

The R-value of integral insulation installed in CMUs shall not be used in determining compliance with Table C402.1.3. Mass walls shall include walls:

1. Weighing not less than 35 psf (170 kg/m<sup>2</sup>) of wall surface area.
2. Weighing not less than 25 psf (120 kg/m<sup>2</sup>) of wall surface area where the material weight is not more than 120 psf (1900 kg/m<sup>3</sup>).



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3. Having a heat capacity exceeding 7 Btu/ft<sup>2</sup>F (144 cal/cm<sup>2</sup>• K).
  4. Having a heat capacity exceeding 5 Btu/ft<sup>2</sup>E (103 kJ/m<sup>2</sup> K), where the material weight is not more than 120 pcf (1900 kg/cm<sup>3</sup>).
- (13) Amending Table C402.4. Table C402.4 ("Building Envelope Fenestration Maximum U-Factor and SHGC Requirements") is amended by amending Exception "b" to read:
- b. Jalousie windows are excepted from SHGC requirements.
- (14) Amending Subsection C402.4.1.2. Subsection C402.4.1.2 is amended to read:
- C402.4.1.2 Increased skylight area with daylight responsive controls.** The skylight area shall be permitted to be not more than five percent of the roof area provided daylight responsive controls complying with Section 0405.2.3.1 are installed in daylight zones under skylights.
- Exception:** Spaces where the designed general lighting power densities are equal to or less than 60 percent of the lighting power densities specified in Table 0405.2(1) or 0405.4.2(2).
- (15) Amending Subsection C402.4.3.5. Subsection C402.4.3.5 is amended to read:
- C402.4.5 Area-Weighted SHGC.** In commercial buildings, an area-weighted average of fenestration products will be permitted to satisfy SHGC requirements.
- Exception:** Jalousie windows are excepted from SHGC requirements.
- (16) Adding Subsection 0403.2.4.2.4. Subsection 0403.2.4.2.4 is added to read:
- C403.2.4.2.4 Door switches.** Opaque and glass doors opening to the outdoors in hotel and motel sleeping units, guest suites and timeshare condominiums shall be provided with controls that disable the mechanical cooling or reset the cooling setpoint to 90 degrees Fahrenheit or greater within five minutes of the door opening. Mechanical cooling may remain enabled if the outdoor air temperature is below the space temperature.
- (17) Amending Subsection C405.2. Subsection C405.2 is amended by amending the exceptions to read:
- Exception:** Spaces that use 60 percent or less of designated watts per square foot are exempt from Sections 0405.2.2 (Time switch controls) and 0405.2.3 (Daylight-responsive controls).



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- (18) Amending Subsection C406.1. Subsection C406.1 is amended to read:

**C 406.1 Requirements.** In addition to the requirements specified in Subsection C406.8 ("Electric vehicle infrastructure"), buildings must comply with at least one of the following:

1. More efficient HVAC performance in accordance with Subsection C406.2;
2. Reduced lighting power density system in accordance with Subsection C406.3;
3. Enhanced lighting controls in accordance with Subsection C406.4;
4. On-site supply of renewable energy in accordance with Subsection C406.5;
5. Provision of a dedicated outdoor air system for certain HVAC equipment in accordance with Subsection C406.6; or
6. High-efficiency service water heating in accordance with Subsection C406.7.

- (19) Amending Subsection C406.3. Subsection C406.3 is amended to read:

**C406.3 Reduced lighting power density.** The total interior lighting power (watts) of the building shall be determined by using 80 percent of the lighting power values specified in Table 0405.4.2(1) times the floor area for the building types, or by using 80 percent of the lighting power values specified in Table 0405.4.2(2) times the floor area for the building type, or by using 80 percent of the interior lighting power allowance calculated by the Space-by-Space Method in Section 0405.4.2.

- (20) Adding Subsection C406.8, Subsection C406.8.1, Table C406.8.1, Subsection C406.8.2, and Table C406.8.2. Subsection C406.8, Subsection C406.8.1, Table C406.8.1, Subsection C406.8.2, and Table C406.8.2 are added to read:

**C406.8 Electric vehicle infrastructure.** All newly-created parking stalls for newly-constructed residential multi-unit and commercial buildings must comply with one of the electric vehicle readiness compliance pathways specified in Subsection C406.8.1 or Subsection C406.8.2.

**C406.8.1 Baseline percentage electric vehicle readiness compliance path.** Newly-constructed parking stalls for new and existing residential multi-unit buildings that add eight or more new parking stalls must be electric vehicle charger ready for at least 25 percent of the newly-added parking stalls. Newly-constructed parking stalls for new and existing commercial buildings that add 12 or more new parking stalls must be electric vehicle charger ready for at least 25 percent of the newly-added parking stalls. As used in this section, "electric vehicle charger ready" means that sufficient wire, conduit, electrical panel service capacity, overcurrent protection devices, and suitable termination points are



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provided to connect to a charging station capable of providing simultaneously an AC Level 2 charge per required parking stall. Charge method electrical ratings are provided in Table C406.8.1.

Compliance requirements under this subsection for retail establishments, as defined in ROH Chapter 21, will be reduced by 20 percent.

Compliance requirements under this subsection for affordable housing units offered for sale or rent to households earning **between 80 and** 140 percent of the area median income for Honolulu will be reduced by **100** percent.

**Table C406.8.1  
CHARGE METHODS ELECTRICAL RATING**

Charge Method	Normal Supply Voltage (Volts)	Maximum Current (Amps — Continuous)	Supply power
AC Level 2	208 to 240V AC, 1-phase	Minimum 32A	208/240VAC/20-100A (16-80A continuous)

### **C406.8.2 Points-based electric vehicle readiness compliance path.**

Newly-constructed parking stalls for new and existing residential multi-unit buildings that add eight or more newly-added parking stalls must be electric vehicle charger ready or equipped to achieve no less than one point for every four parking stalls based on the EV charger capacity requirements and values listed in Table C406.8.2. Newly-constructed parking stalls for new and existing commercial buildings that add twelve or more newly-added parking stalls must be electric vehicle charger ready or equipped to achieve no less than one point for every four parking stalls based on the capacity requirements and values listed in Table C406.8.2.

Compliance requirements under this subsection for retail establishments, as defined in ROH Chapter 21, will be reduced by 20 percent.

Compliance requirements under this subsection for affordable housing units offered for sale or rent to households earning **between** 80 and 140 percent of the area median income for Honolulu will be reduced by **100** percent.



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Retail establishments, as defined in ROH Chapter 21, may only qualify for compliance points under Table C406.8.2 in the following two categories: (1) Dedicated EV Ready Stalls, or (2) Common Area Stall with EV Charging Equipment Installed.

For purposes of compliance under this subsection, building developers may aggregate points across multiple projects and phases; provided that the aggregate sum across applicable projects meet the established compliance points and each individual project achieves a minimum of **one AC Level 2 32A electric** vehicle charger ready parking space per project. All aggregation plans under this subsection must be identified and verified by a certified design professional and the building official at the time of permitting.

To recognize future advancements in electric vehicle technology, alternatives can be proposed that provide an equivalent Total Vehicles Charged to the charge methods in Table C406.8.1. "Total Vehicles Charged" means the number of unique vehicles that can be charged within an equivalent 35 miles in 9 hours with 15 minute turnaround intervals. Approval is at the discretion of the Department of Planning and Permitting.

**Table C406.8.2**  
**ELECTRIC VEHICLE READINESS POINTS-BASED COMPLIANCE VALUES**



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Table C406.8.1 ELECTRIC VEHICLE CHARGER READY POINTS COMPLIANCE					
CHARGE AND ELECTRICAL SPECIFICATION			COMPLIANCE POINTS		
Charge Method	Normal Supply voltage (VAC)	Current (A-Continuous)	Dedicated	Common Area	Common Area w/ EVSE
AC Level 2	208 to 240 VAC 1-phase	16A	1 (garage)		
AC Level 2	208 to 240 VAC 1-phase	32A	1	5	10
AC Level 2	208 to 240 VAC 1-phase	32A < X ≤ 80A	2	10	20
DC Level 3	480/277 VAC 3-phase 4w	80A min peak power	7	15	100

- (21) Amending Subsection C408.2.4.1. Subsection C408.2.4.1 adopted by the is amended to read:

**C408.2.4.1 Acceptance of reports.** Buildings, or portions thereof, shall not be considered acceptable for a certificate of occupancy until the code official has received a letter of transmittal from the building owner acknowledging that the building owner or owner's authorized agent has received the Preliminary Commissioning Report.

- (22) Amending Subsection C408.3.1. Subsection C408.3.1 is amended to read:

**C408.3.1 Functional testing.** Prior to issuance of a certificate of occupancy, the licensed design professional shall provide evidence that the lighting control systems have been tested to ensure that control hardware and software are calibrated, adjusted, programmed and in proper working condition in accordance with the construction documents and manufacturer's instruction. Functional testing shall be in accordance with Sections C408.3.1.1 and C408.3.1.2 for the applicable control type.



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- (23) Amending Subsection C501.4. Subsection C501.4 is amended to read:

**C501.4 Compliance.** *Alterations, repairs, additions and changes of occupancy to, or relocation of, existing buildings and structures must comply with the provisions and regulations for alterations, repairs, additions and changes of occupancy to, or relocation of, respectively, required by this code.*

- (24) Amending Subsection C503.3.1. Subsection C503.3.1 is amended to read:

**C503.3.1 Roof replacement.** *Roof replacements shall comply with Table C402.1.3 or C402.1.4 where the existing roof assembly is part of the building thermal envelope and contains insulation entirely above the roof deck.*

**Exception:** The following alterations need not comply with the requirements for new construction, provided the energy use of the building is not increased. When uninsulated roof sheathing is exposed during alteration, two of the following must be installed:

1. Table C402.3 (solar reflectance); Energy Star compliant roof covering;
2. Radiant barrier;
3. Attic ventilation via solar attic fans or ridge ventilation or gable ventilation; and/or
4. Two or more of the exceptions listed in Table C402.3.

- (25) Amending Subsection R103.1. Subsection R103.1 is amended to read:

**R103.1 General.** Construction documents and other supporting data shall be submitted to indicate compliance with this code. The construction documents shall be prepared, designed, approved and observed by a duly licensed design professional, as required by Chapter 464 of the HRS. The responsible design professional shall provide on the plans a signed statement certifying that the project is in compliance with this code.

**Exception:** Any building, electrical or plumbing work that is not required to be prepared, designed, approved or observed by a licensed professional architect or engineer, pursuant to Chapter 464, HRS. Specifications and necessary computations need not be submitted when authorized by the Building Official.

- (26) Amending Subsection R401.2. Subsection R401.2 is amended to read :



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**R401.2 Compliance.** Projects shall comply with one of the following:

1. Sections R401 .3 through R404;
  2. Section R405 and the provisions of Sections R401 through R404 labeled "mandatory";
  3. An energy rating index (ERI) approach in Section R406; or
  4. The Tropical Zone requirements in Section R401.2.1.
- (27) Amending Subsection R401.2.1. Subsection R401.2.1 is amended to read:

**R401.2.1 Tropical zone.** Residential buildings in the tropical zone at elevations below 2,400 feet (731.5 m) above sea level must comply with this chapter by satisfying the following conditions:

1. Not more than one-half of the area of the dwelling unit is air conditioned.
2. The dwelling unit is not heated.
3. Solar, wind or another renewable energy source supplies not less than 90 percent of the energy for service water heating.
4. Glazing in conditioned space shall have a maximum solar heat gain coefficient as specified in Table R402.2.1.
5. Skylights in dwelling units shall have a maximum Thermal Transmittance (U-factor), as specified in Table R402.1.2.
6. Permanently installed lighting is in accordance with Section R404.
7. The roof/ceiling complies with one of the following options:
  - a. Comply with one of the roof surface options in Table C402.3 and install R-13 insulation or greater; or
  - b. Install R-19 insulation or greater.

If present, attics above the insulation are vented and attics below the insulation are unvented.

**Exception:** The roof/ceiling assembly are permitted to comply with Section R407.



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8. Roof surfaces have a minimum slope of one fourth inch per foot of run. The finished roof does not have water accumulation areas.
9. Operable fenestration provides ventilation area equal to not less than 14 percent of the floor area in each room. Alternatively, equivalent ventilation is provided by a ventilation fan.
10. Bedrooms with exterior walls facing two different direction have operable fenestration or exterior walls facing two different directions.
11. Interior doors to bedrooms are capable of being secured in the open position.
12. Ceiling fans or whole house fans are provided for bedrooms and the largest space that is not used as bedroom.
13. Walls, floors and ceilings separating air conditioned spaces from non-air conditioned spaces shall be constructed to limit air leakage in accordance with the requirements in Table R402.4.1.1.

(28) Amending Table R402.1.2. Table R402.1.2 is amended to read:

**Table R402.1.2**  
**INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENTS**

CLIMATE ZONE	FENESTRATION U-FACTOR <sup>a</sup>	SKYLIGHT <sup>a</sup> U-FACTOR	GLAZED FENESTRATION SHGC <sup>b</sup> ..	CEILING R-VALUE	WOOD FRAME WALL R-VALUE	MASS WALL R-VALUE	FLOOR R-VALUE	BASEMENT <sup>c</sup> WALL R-VALUE	SLAB <sup>d</sup> R-VALUE 8- DEPTH	CRAWL SPACE WALL R-VALUE
1	NR	0.75	0.25	30	13	X or N/P <sup>e</sup>	13	0	0	0
	0.40	0.65	0.25	38	13	4/6	13	0	0	0
3	0.35	0.55	0.25	38	20 or 13-5 <sup>h</sup>	8'13	19	5/13 <sup>i</sup>	0	5/13
4 except Marine 4	0.35	0.55	0.40	49	20 or 1.3-5 <sup>h</sup>	8'13	19	10/13	10.2 ft	10/13
5 and Marine 4	0.32	0.55	NR	49	20 or 13-5 <sup>h</sup>	13'1 <sup>7</sup>	30 <sup>i</sup>	15/19	10.2 ft	15/19
6	0.32	0.55	NR	49	20-5 or 13+10 <sup>h</sup>	15/20	30 <sup>i</sup>	15/19	10.4 ft	1 <sup>5</sup> /9
7 and 8	0.32	0.55	NR	49	20-5 or 13+10 <sup>h</sup>	19/21	38 <sup>i</sup>	15/19	10.4 ft	15/19

For SI: 1 foot = 304.8 mm.

- a. R-values are minimums. U-factors and SHGC are maximums. When insulation is installed in a cavity which is less than the label or design thickness of the insulation, the installed R-value of the insulation shall not be less than the R-value specified in the table.



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- b. The fenestration U-factor column excludes skylights. The SHGC column applies to all glazed fenestration. Exception: Skylights may be excluded from glazed fenestration SHGC requirements in climate zones 1 through 3 where the SHGC for such skylights does not exceed 0.30.
- c. "15/19" means R-15 continuous insulation on the interior or exterior of the home or R-19 cavity insulation at the interior of the basement wall. "15I19" shall be permitted to be met with R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the home. "10/13" means R-10 continuous insulation on the interior or exterior of the home or R-13 cavity insulation at the interior of the basement wall.
- d. R-5 shall be added to the required slab edge R-values for heated slabs. Insulation depth shall be the depth of the footing or 2 feet, whichever is less in Climate Zones 1 through 3 for heated slabs.
- e. There are no SHGC requirements in the Marine Zone.
- f. Basement wall insulation is not required in warm-humid locations as defined by Figure R301.1 and Table R301.1.
- g. Or insulation sufficient to fill the framing cavity, R-19 minimum.
- h. The first value is cavity insulation, the second value is continuous insulation, so "13+5" means R-13 cavity insulation plus R-5 continuous insulation.
- i. The second R-value applies when more than half the insulation is on the interior of the mass wall.
- j. Exception: R-value for mass walls are not required if mass walls meet one of the following requirements: (1) have a reflectance > 0.64; (2) have overhangs with a projection factor 0.3; or (3) are 6 inches in thickness.
- k. Exception: Jalousie windows are excepted from SHGC requirements.

(29) Amending Table R402.2.1. Table R402.2.1 is amended to read:

**Table R402.2.1.**  
**Window SHGC Requirements**

<b>Projection Factor of overhang from base of average window sill</b>	<b>SHGC</b>
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< 0.30	0.25
0.30 – 0.50	0.40
≥ 0.50	N/A

- a. Exception: North-facing windows with  $pf > 0.20$  are exempt from the SHGC requirement. Overhangs shall extend two feet on each side of window or to nearest wall, whichever is less.
- b. Exception: Jalousie windows are excepted from SHGC requirements
- (30) Amending Subsection R402.2.5. Subsection R402.2.5 is amended to read:

**R.402.2.2.5 Mass walls.** Mass walls for the purposes of this chapter will be considered above-grade walls of concrete block, concrete, insulated concrete form (ICF), masonry cavity, brick (other than brick veneer), earth (adobe, compressed earth block, rammed earth), solid timber/logs, or any other wall having a heat capacity equal to or exceeding 6 Btu/ft<sup>2</sup> x °F (123 kJ/m<sup>2</sup> x K). The minimum thermal resistance (R-value) of mass walls must be as specified in Table R402.1.2.

Exception: Insulation or r-value for mass walls, indicated in Table R402.1.2, is not required when one or more of the following conditions is met:

1. Walls have a covering with a reflectance of  $\geq 0.64$ ;
  2. Walls have overhangs with a projection factor equal to or greater than 0.3. The projection factor is the horizontal distance from the surface of the wall to the farthest most point of the overhang divided by the vertical distance from the first floor level to the bottom most point of the overhang; or
  3. Concrete, concrete masonry units (CMU), and similar mass walls are 6 inches or greater in thickness.
- (31) Amending Subsection R402.3.2. Subsection R402.3.2 is amended to read:
- R402.3.2 Glazed fenestration SHGC.** Fenestration shall have a maximum solar heat gain coefficient as specified in Table R402.1.2. An area-weighted average of fenestration products more than 50 percent glazed shall be permitted to satisfy the SHGC requirements.

**Exception:** Dynamic glazing is not required to comply with this section when both the lower and higher labeled SHGC already comply with the requirements of Table R402.1.2.



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**Exception:** Jalousie windows are excepted from SHGC requirements.

- (32) Adding Subsection R402.4.1.3. Subsection **R402.4.1.3** is added to read:

**R402.4.1.3 Sampling.** For builders of multiple single homes and multi-family **residential buildings** of similar construction type and envelope systems (i.e. production home building), air infiltration/duct testing may be completed by following Chapter 6 ("Standard for Sampled Ratings"), of the current Residential Energy Service Network (RESNET) National Home Energy Rating System Standards.

- (33) Adding Subsection R403.5.5. Subsection R403.5.5 is added to read:

- (34) **R403.5.5 Solar water heating.** Residential single-family dwellings shall comply with the solar water heater systems standards established by HRS Section 269-44, unless a variance is approved pursuant to HRS Section 196.5.

- (35) Adding Subsection R403.6.2. Subsection R403.6.2 is added to read:

**R403.6.2 Ceiling fans (Mandatory).** A ceiling fan or whole house fan is provided for bedrooms and the largest space that is not used as bedroom; provided that the whole house mechanical ventilation system complies with the efficacy requirements of Table R403.6.1.

**Exception:** For production home building, ceiling fan junction boxes must be provided for bedrooms and the largest interior space that is not used as a bedroom, and ceiling fan equipment must be provided as a buyer's option

- (36) Adding Subsection R404.2. Subsection R404.2 is added to read:

**R404.2 Solar conduit and electrical panel readiness.** Construction documents must indicate a location for inverters, metering equipment, battery equipment, and other equipment necessary to interconnect a residence with on-site solar energy generation facilities with the electrical grid in compliance with applicable laws, statutes, and utility tariffs. Construction documents must indicate a pathway for routing of conduit from the solar panel location to the point of interconnection with electrical service. New single-family detached dwellings, two-family detached dwellings, and duplexes must install for each residence an electrical panel with reserved space to accommodate not less than a five Kilowatt (AC) photovoltaic system. New multi-family **residential buildings** must install an electrical panel that includes space reserved to accommodate a photovoltaic system: (1) sized to serve common area electrical loads, or (2) sized to the roof space available. The reserved space on the **electric panel** must be clearly labeled as solar PV ready. All feeders and electrical distribution equipment,



## A BILL FOR AN ORDINANCE

including switchgear, switchboards, and panelboards, that will be fed simultaneously by the electrical grid and other power sources must be sized to support the installation of future solar energy generation systems per the interconnection requirements of the Electrical Code. New residential buildings must also install conduit not less than one and one-half inches to provide a pathway from the electrical panel to the inverter location and from the inverter location to the underside of the roof sufficient to allow future installation of solar equipment. If conduits are to be installed between separate buildings or other structures, construction documents must provide sufficient details to show that compliance with the Electrical Code's restrictions on the number of power supplies to each building or other structure has been examined.

- (37) Adding Subsection R403.6.2. Subsection R403.6.2 is added to read:

**R403.6.2 Ceiling fans (Mandatory).** A ceiling fan or whole house fan is provided for bedrooms and the largest space that is not used as bedroom; provided that the whole house mechanical ventilation system complies with the efficacy requirements of Table R403.6.1.

- (38) Amending Table R405.5.2(1). Table R405.5.2(1) is amended to read:

**Table R405.5.2(1)**  
**SPECIFICATIONS FOR THE STANDARD REFERENCE AND PROPOSED DESIGNS**

BUILDING COMPONENT	STANDARD REFERENCE DESIGN	PROPOSED DESIGN
Heating Systems	Fuel type: Same as proposed design	As proposed
	Efficiencies	
	Electric: Air-source heat pump with prevailing federal minimum standards	
	Nonelectric furnaces: Natural gas furnace with prevailing federal minimum standards	
	Nonelectric boilers: Natural gas boiler with prevailing federal minimum standards	As proposed



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	Capacity: Sized in accordance with Section R403/	As proposed
Cooling systems	Fuel type: Electric Efficiency: In accordance with prevailing federal minimum standards	As proposed
	Capacity: Sized in accordance with Section R403.7	As proposed

(39) Amending Table R407.1. Table R407.1 is amended to read:

**Table R407.1  
POINTS OPTION**

<b>Walls</b>		<b>Standard Home Points</b>	<b>Tropical Home Points</b>
<b>Wood Framed</b>			
	R-13 Cavity Wall Insulation	0	1
	R-19 Roof Insulation	-1	0
	R-19 Roof Insulation + Cool roof membrane' or Radiant Barrier <sup>3</sup>	0	1
	R-19 Roof Insulation + Attic Venting <sup>2</sup>	0	1
	R-30 Roof Insulation	0	1
	R-13 Wall Insulation + high reflectance walls <sup>4</sup>	1	2
	R-13 Wall insulation + 90% high efficacy lighting and Energy Star Appliances <sup>5</sup>	1	2
	R-13 Wall insulation + exterior shading wpf=0.3b	1	2
	Ductless Air Conditioner'	1	1
	1.071 X Federal Minimum SEER for Air Conditioner	1	1
	1.142 X Federal Minimum SEER for Air Conditioner	2	2
	No air conditioning installed	Not applicable	2
	House floor area ... 1,000 ft <sup>2</sup>	1	1



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	House floor area 2,500 ft <sup>2</sup>	-1	-1
	Energy Star Fans <sup>8</sup>	1	1
	Install 1 kw or greater of solar electric	1	1
<b>Metal Framed</b>			
	R-13 + R-3 Wall Insulation	0	1
	R-13 Cavity Wall insulation + R-0	-1	0
	R-13 Wall Insulation + high reflectance walls <sup>4</sup>	0	1
	R-13 Wall Insulation + 90% high efficacy lighting and Energy Star Appliances <sup>5</sup>	1	2
	R-13 Wall Insulation + exterior shading wpf=0.3 <sup>6</sup>	0	1
	R-30 Roof Insulation	0	1
	R-19 Roof Insulation	-1	0
	R-19 + Cool roof membrane' or Radiant Barrier <sup>3</sup>	0	1
	R-19 Roof Insulation + Attic Ventilation	0	1
	Ductless Air Conditioner'	1	1
	1.071 X Federal Minimum SEER for Air Conditioner	1	1
	1.142 X Federal Minimum SEER for Air Conditioner	2	2
	No air conditioning installed	Not Applicable	2
	House floor areas 1,000 ft <sup>2</sup>	1	1
	House floor area . . . 2,500 ft <sup>2</sup>	-1	-1
	Energy Star Fans'	1	1
	Install 1 kw or greater of solar electric	1	1
<b>Mass Walls</b>			
	R- 3/4 Wall Insulation	0	1
	R-0 Wall Insulation	-1	0
	R-0 Wall Insulation + high reflectance walls <sup>4</sup>	0	1
	R-0 Wall Insulation + 90% high efficacy lighting and Energy Star Appliances <sup>5</sup>	1	2
	R-0 Wall Insulation + exterior shading WPF = 0.3 <sup>6</sup>	0	1
	R-19 Roof Insulation	-1	0
	R-19 Roof Insulation + Cool roof membrane' or Radiant Barrier <sup>3</sup>	0	1



# CITY COUNCIL

CITY AND COUNTY OF HONOLULU  
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BILL **25 (2019), CD2 (Draft)**

## A BILL FOR AN ORDINANCE

R-19 Roof Insulation + Attic Venting	0	1
R-30 Roof Insulation	0	1
Ductless Air Conditioner <sup>1</sup>	1	1
1.071 X Federal Minimum SEER for Air Conditioner	1	1
1.142 X Federal Minimum SEER for Air Conditioner	2	2
No air conditioning installed	Not Applicable	2
House floor area ≤ 1,000 ft <sup>2</sup>	1	1
House floor area > 2,500 ft <sup>2</sup>	-1	-1
Energy Star Fans <sup>1</sup>	1	1
Install 1 kW or greater of solar electric	1	1

- 1 Cool roof with three-year aged solar reflectance of 0.55 and 3-year aged thermal emittance of 0.75 or 3-year aged solar reflectance index of 64.
- 2 One cfm/ft<sup>2</sup> attic venting.
- 3 Radiant barrier shall have an emissivity of no greater than 0.05 as tested in accordance with ASTM E-408. The radiant barrier shall be installed in accordance with the manufacturer's installation instructions.
- 4 Walls with covering with a reflectance of  $\geq 0.64$ .
- 5 Energy Star rated appliances include refrigerators, dishwashers, and clothes washers and must be installed for the Certificate of Occupancy.
- 6 The wall projection factor is equal to the horizontal distance from the surface of the wall to the farthest most point of the overhang divided by the vertical distance from the first floor level to the bottom most point of the overhang.
- 7 All air conditioning systems in the house must be ductless to qualify for this credit.
- 8 Install ceiling fans or whole-house fans in all bedrooms and the largest space that is not used as a bedroom.

(40) Amending Subsection R501.4. Subsection R501.4 is amended to read:

**R501.4 Compliance.** Alterations, repairs, additions, and changes of occupancy to, or relocation of, existing buildings and structures must comply with the provisions and regulations for alterations, repairs, additions, and changes of occupancy to, or relocation of, respectively required by this code.

(41) Amending Subsection R503.1.1. Subsection R503.1.1 is amended by adding the following exception and footnote to the exception to read:



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CITY AND COUNTY OF HONOLULU  
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BILL **25 (2019), CD2 (Draft)**

## A BILL FOR AN ORDINANCE

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7. When uninsulated roof sheathing is exposed during alteration, a minimum of two of the following shall be installed:
- a. Energy Star compliant roof covering;
  - b. Radiant barrier;
  - c. Attic ventilation via solar attic fans or ridge ventilation or gable ventilation; or
  - d. A minimum of two exceptions listed in C402.3.

Footnote to exception: Shake roofs on battens shall be replaced with materials that result in equal or improved energy efficiency.



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BILL **25 (2019), CD2 (Draft)**

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SECTION 4. This ordinance takes effect 90 days after its approval.

INTRODUCED BY:

Ann Kobayashi (br)

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DATE OF INTRODUCTION:

May 6, 2019  
Honolulu, Hawaii

\_\_\_\_\_  
Councilmembers

## EXHIBIT B

### Summary of Stakeholders EV Point System Compromises

#### Stakeholders CD2 - Original

Table C406.8.1

#### CHARGE METHODS ELECTRICAL RATING

CHARGE AND ELECTRICAL SPECIFICATION			COMPLIANCE POINTS		
Charge Method	Normal Supply voltage (VAC)	Current (A-Continuous)	Dedicated	Common Area	Common Area w/ EVSE
AC Level 1	120 VAC, 1-phase	12A			
AC Level 2	208 to 240 VAC 1-phase	$16A \leq X \leq 32A$	1	1	2
AC Level 2	208 to 240 VAC 1-phase	$32A \leq X \leq 80A$	2	10	20
DC Level 3	480/277 VAC 3-phase 4w	80A min peak power	3 15 (fleet only)	20 50	40 100

#### Stakeholder CD2 - Compromise #1

- Deleted AC Level 1 Charge Method
- Cut point values in half (shown in red)

Table C406.8.1 ELECTRIC VEHICLE CHARGER READY POINTS COMPLIANCE					
CHARGE AND ELECTRICAL SPECIFICATION			COMPLIANCE POINTS		
Charge Method	Normal Supply voltage (VAC)	Current (A-Continuous)	Dedicated	Common Area	Common Area w/ EVSE
AC Level 2	208 to 240 VAC 1-phase	16A	1 (garage)		
AC Level 2	208 to 240 VAC 1-phase	32A	1	5	10
AC Level 2	208 to 240 VAC 1-phase	$32A < X \leq 80A$	2	10	20
DC Level 3	480/277 VAC 3-phase 4w	80A min peak power	15	25	100

#### Stakeholder CD2 - Compromise #2 - CURRENT PROPOSAL

- Reduced DC Level 3 point values (shown in blue)

Table C406.8.1 ELECTRIC VEHICLE CHARGER READY POINTS COMPLIANCE					
CHARGE AND ELECTRICAL SPECIFICATION			COMPLIANCE POINTS		
Charge Method	Normal Supply voltage (VAC)	Current (A-Continuous)	Dedicated	Common Area	Common Area w/ EVSE
AC Level 2	208 to 240 VAC 1-phase	16A	1 (garage)		
AC Level 2	208 to 240 VAC 1-phase	32A	1	5	10
AC Level 2	208 to 240 VAC 1-phase	$32A < X \leq 80A$	2	10	20
DC Level 3	480/277 VAC 3-phase 4w	80A min peak power	7	15	100

# EXHIBIT C

## Bill 25 - Estimated Costs

Based on CD2 (Elefante) with Hand Carry Amendment (Elefante) as presented at 1/23/2020 Zoning, Planning and Housing Committee Hearing.

2/12/2020

Bill 25 - Subsection	Cost Range per SF Home	Cost Range per MF Unit	Comment
C206.8 Electric Vehicle Infrastructure		\$1,400 - \$1,500	Multi-family - Underground Infrastructure. Based on engineer's estimate of 120 unit condo project.
		\$0 - \$3,000	Multi-family - Upgrades to transformers and electrical infrastructure. This cost is project specific and determine by HECO during the design phase of the project. It could require no additional transformers or it could require a doubling of transformers. Transformers cost between \$30,000 - \$40,000 each. The 120 unit condo project has 9 transformers without EV requirements.
R403.5.5 Solar Water Heating	\$4,550 - \$7,502		Cost difference between a solar hot water system vs an instant gas water heater. Based on subcontractor bid pricing.
R404.2 Solar Conduit and Electrical Panel Readiness		\$250 - \$500	Multi-family - building infrastructure (including required fire stopping)
	\$350 - \$500		Single Family - house infrastructure.
R404.3 Electric Vehicle Readiness	\$350 - \$500		Single Family - house infrastructure.
	\$100 - \$300	\$100 - \$300	Depends on # of plan/bldg types and # of each type. Note: additional cost is reduced since the State Energy Code requires testing for all homes.
R402.1.3 Sampling		\$150 - \$600	Addition/upgrade to 3-wire fan junction boxes. Note: additional cost is reduced since the State Energy Code requires the installation of ceiling fans for all homes
R403.6.2 Ceiling Fans (Exception)	\$150 - \$600		
Bill 25 - Total Estimated Cost Range	\$5,500 - \$9,402	\$1,900 - \$5,900	

## IECC + SECC - Estimate Costs

Based on 2012 IECC + SECC Approved Amendments.

Subsection	Cost Range per SF Home	Cost Range per MF Unit	Comment
SECC - R402.3.2 Glazed Fenestration SHGC	\$200	\$175	Upgrade from SHGC 0.30 to 0.25
IECC - R402.4 Air Leakage	\$1,000 - \$7,000	\$1,000 - \$3,000	Upgrade building thermal envelope.
IECC - R403.6 Mechanical Ventilation	\$1,400	\$850	Upgrade bathroom exhaust fans
IECC - R404.1 Lighting Equipment	\$700	\$280	Upgrade to all LED Lighting Fixtures
IECC - Total Estimated Cost Range	\$3,300 - \$9,300	\$2,305 - \$4,305	
IECC + SECC + Bill 25 - Total Estimate Cost Range	\$8,800 - \$18,702	\$4,205 - \$10,205	



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Testimony to the  
Honolulu City Council  
Committee on Zoning, Planning and Housing

9:00 a.m., February 27, 2020

RE: Bill 25 Relating to Adoption of the State Energy Conservation Code

Aloha Chair Menor, Vice Chair Waters, and members of the Committee:

We are testifying on behalf of the Building Owners and Managers Association of Hawaii, a trade organization focused on actively and responsibly representing the commercial real estate industry through the collection, analysis and communication of information and through professional development. BOMA Hawaii is a leader in promoting energy efficient buildings and strongly supports energy efficient alternatives transportation.

It has been estimated that more than 500,000 electric vehicles are now on the road in the United States, and this is only expected to grow. As plug-in cars have become more visible on the nation's highways and local streets, there has also been a corresponding need for electric vehicle charging stations. This emerging need is creating a marketplace demand. Many building owners have installed EV charging stations and have successfully used them as a profit center as well as an amenity to attract new business and/or new tenants. Others are reluctant to take on the cost (installation cost, lost revenue from lost parking spaces, etc.), ongoing maintenance and management responsibilities, and liability. Where building owners can balance the benefits and potential draw backs, and where it makes economic sense, we believe that property owners will move forward to meet the need, without federal, state or local mandates.

We want to contribute positively to the discussion about promoting and incentivizing the construction of parking stations ready to be equipped with electric vehicle charging stations. We look forward to serving as a resource to the Council's subject matter committees on this bill and appreciate the opportunity to testify.

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Testimony of The Michaels Organization | Michaels Development - Hawai'i Region  
RELATING TO BILL 25 (2019) (Proposed CD2 Submitted by Councilmember Elefante)

Thursday, February 27, 2020 at 9:00 am, Committee Meeting Room

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Chairs Ron Menor, Vice Chair Tommy Waters, and  
Members Brandon J.C. Elefante, Ann H. Kobayashi and Joey Manahan  
Committee on Zoning, Planning and Housing

Energy efficiency codes and regulations have real-world cost implications for everyone, but particularly for those living in low-income affordable housing communities, as cumulative regulations drive housing construction costs higher disproportionately affecting low-income families. Layering energy efficiency mandates onto cumbersome building codes, restrictive zoning controls, extraneous parking requirements, and burdensome environmental regulations increases the cost of each affordable housing development, which reduces the affordable housing that can be created due to the finite amount of financing subsidy available.

To avoid an additional cumulative cost impact to affordable housing, the preferred outcome is for an exemption to electric vehicle readiness compliance for parking stalls in newly-constructed affordable housing residential multi-unit buildings offered to households earning at or below 100 percent of the area median income.

It is important to note that to accomplish more diversity in affordable rental housing communities, mixed-income housing that includes both subsidized (30% to 60% AMI) and unsubsidized (80% to 100%) housing, of which all units are restricted for the life of the project and are predominately at or below 60% AMI to meet LIHTC subsidy requirements, are more prevalent. Thus, the 100 percent of area median income as the threshold for this exception is preferred and will allow us to continue delivering the most units.

However, if the total Exception in Bill 25 (2019) (Proposed CD2 Submitted by Councilmember Kobayashi) C406.8.1 is not adopted, then the Exception in Bill 25 (2019) (Proposed CD2 Submitted by Councilmember Elefante) C406.8.1, with a change in Exemption 3's area median income from "80 percent" to "**100 percent**" or below is an alternative.

Thank you for the opportunity to provide comments on BILL 25 (2019) C406.8.1.



Karen Seddon, Regional Vice President  
Michaels Development



Email: [communications@ulupono.com](mailto:communications@ulupono.com)

HONOLULU CITY COUNCIL COMMITTEE ON ZONING, PLANNING AND HOUSING  
Thursday, February 27, 2020 — 9:00 a.m. — Committee Meeting Room

**Ulupono Initiative Strongly Supports Bill 25 (2019) Proposed CD 2, Relating to the Adoption of the State Energy Conservation Code.**

Dear Chair Menor and Members of the Committee:

My name is Amy Hennessey, and I am the Senior Vice President of Communications & External Affairs of Ulupono Initiative. We are a Hawai'i-based impact investment firm that strives to improve our community's quality of life by working toward solutions that create more locally produced food; increase affordable clean, renewable energy and transportation options; and better manage freshwater and waste resources.

**Ulupono strongly supports Bill 25 (2019) Proposed CD2** – which updates the City's Building Energy Conservation Code to help make our residential and commercial buildings more energy-efficient. It supports energy-efficient new homes, strengthens the solar water heating requirements, expands access to electric vehicle (EV) charging capacity, ensures solar power access for new homes, and promotes the use of super-efficient tropical building standards. Updates to the City's Building Energy Conservation Code can help achieve 33-65 percent more annual energy reductions in home buildings compared to current code requirements.

Of particular note, EVs are a critical part of our climate and transportation energy future:

- EVs provide immediate greenhouse gas (GHG) emissions reductions. EVs produce zero emissions at the tailpipe, and even when full lifecycle emissions (from manufacturing through disposal) are considered, EV emissions are approximately 50 percent lower than internal combustion engine vehicles. Here in Hawai'i, they become cleaner every year.
- EVs can alleviate Hawai'i's high cost of living. In one study, rural drivers in Hawai'i saved \$417 per year by switching from gasoline to electricity.
- EVs are prime for market acceleration from public support. We have more EVs per capita than any other state, except California, but declining availability of charging infrastructure. In 2015, there were 8 EVs for every public charging station in Hawai'i and, in 2018, there were 13 EVs per charger.

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Requiring qualifying facilities to be “EV-ready” is smart future-proofing. Recently, the International Code Council (ICC) voted to update its building standards to include EV-ready provisos. The rationale was that the cost of retrofits is significantly more expensive than when installed upfront and such an upfront investment is a relatively small part of the total building cost. The ICC approval only validates the County’s proposal and market need for EV-ready policies.

UluPono would like to request that the following language under section C406.8.2, “Points-based electric vehicle readiness compliance path,” be stricken:

~~“For purposes of compliance under this subsection, building developers may aggregate points across multiple projects and phases; provided that each individual project achieves no less than 10 percent compliance or adds a minimum of one electric vehicle charger ready parking space per project, whichever is greater. All aggregation plans under this subsection must be identified and verified by a certified design professional and the building official at the time of permitting.”~~

First, keeping this language in the measure will undoubtedly create enforcement issues across projects and phases. For example, what qualifies when and how a building official would be able to determine compliance? In our research, it is estimated that only 30 percent of existing parking structures comply with the current State electric vehicle supply equipment (EVSE) requirements, and that is a clear and simple calculation. This measure’s compliance path is significantly more complicated for DPP and may increase permitting review time.

Furthermore, this structure can easily create the unintended consequence of disproportionately allocating EV-readiness to higher-end, luxury projects, versus moderate or affordable housing. Developers will naturally follow near-term incentives, which can create a long-term bias as to who may reap the benefits of driving electric, and who may be “priced out” of charging at home. Rather than helping the less affluent access more affordable transportation options, this will only continue to make it convenient to those of means.

As such, we are also concerned that this bill reduces the EV-ready requirement for affordable housing. While we respect the sensitivity to increasing housing costs, we believe EV-readiness has minimal impact on a home’s monthly budget and, more importantly, allows those households to actually reduce their overall cost of living.

A recent case study in San Francisco estimated the costs of EV-readiness at the time of construction to be less than \$1,000 per parking spot. Even if the costs were \$2,000 per spot, these additions would only increase the price of a condo by 0.5-0.7 percent. This equates to an increase in a typical 20 percent down payment by \$400 and a monthly mortgage (or related rent) by less than \$10 per month. In addition, EV drivers stand to



save \$35 or more per month by driving electric, so this policy enables residents to lower their overall cost of living rather than pricing Hawai'i families out of such benefits since the costs to retrofit can be exorbitantly expensive.

Given the current consideration of Bill 2, which would eliminate the minimum parking requirements altogether, we believe that such market flexibility combined with Bill 25 can more than substantiate cause to maintain the full EV-ready requirement for affordable housing. A structured parking space costs more than \$45,000 to build, so eliminating unneeded parking can have a material impact on developing new housing and more than make up for the relatively small cost of EV-readiness.

As our energy issues become more complex and challenging, we appreciate this committee's efforts to look at policies that support clean ground transportation.

Amy Hennessey, APR  
Senior Vice President, Communications & External Affairs



Mobile: 808.428.8717  
Email: [lindaschatz@schatzcollaborative.com](mailto:lindaschatz@schatzcollaborative.com)  
[Schatzcollaborative.com](http://Schatzcollaborative.com)

February 26, 2020

Attn: Zoning, Planning and Housing Committee  
City and County of Honolulu

**SUBJECT: Opposed to Bill 25, CD 1**

Dear Zoning, Planning and Housing Committee Council Members

I am submitting written testimony to express my concerns over the proposed Bill 25, CD1. I am opposed to Bill 25, CD 1. The County's Ola: Oahu Resilience Strategy highlights affordable housing and cost of living as a major factor in achieving a resilient community. This Bill 25 puts cost burdens on affordable housing developers trying to meet this goal and therefore works against their own strategy.

The proposed exceptions of 80%AMI and below are not consistent with current county affordable housing policy. The City and County of Honolulu's current policy, ordinance 18-10 notes affordability at 120%AMI and below. Bill 25 should exempt affordable housing at 120%AMI and below to ensure the financial feasibility of affordable housing into the future. The County's 201H guidelines also require units to be 120%AMI and below. Policies should align in order to be most effective in producing much needed housing units for our people.

Costs of EV requirements in the current bill would add \$1,400-\$4,500 per unit to affordable housing. For rental housing, this increase in costs puts projects that are barely hanging on a thread over the edge of being infeasible. Projects that are 120%AMI to 80%AMI do not qualify for any types of federal, state, or county subsidies. They must rely on managing costs efficiently and cross subsidizing units by a mix of incomes that spread from 80%AMI to 120%AMI to be feasible.

The National Association of Home Builders state in September of 2019 regarding EV mandates that, *"New mandates such as these can have an impact on housing affordability, as additional cost prices out many potential future homeowners. NAHB estimates that if the median U.S. new home price goes up by \$1,000, more than 127,000 households would be priced out of the housing market nationwide."*

I am in favor of the EV point system because it provides homebuilder's choices in the current draft but oppose the number of points allocated in the point system. The points proposed are

currently too low. I propose a point system as noted below that is much more equitable and fairer:

Table C406.8.1 ELECTRIC VEHICLE CHARGER READY POINTS COMPLIANCE					
CHARGE AND ELECTRICAL SPECIFICATION			COMPLIANCE POINTS		
Charge Method	Normal Supply voltage (VAC)	Current (A-Continuous)	Dedicated	Common Area	Common Area w/ EVSE
AC Level 2	208 to 240 VAC 1-phase	16A	1 (garage)		
AC Level 2	208 to 240 VAC 1-phase	32A	1	5	10
AC Level 2	208 to 240 VAC 1-phase	32A < X ≤ 80A	2	10	20
DC Level 3	480/277 VAC 3-phase 4w	80A min peak power	7	15	100

This point system rewards actual EV solutions that produce an increasing number of cars to be charged in a given time period, which fairly rewards developers that try to make EV more efficient and available to more people.

Based on an article by POLITICO by Jonathan Lesser in May 2018, *"The U.S. Energy Information Administration's most recent long-term forecast on the projection of the number of new electric vehicles, the net reduction in CO2 emissions between 2018 and 2050 would be only about one-half of 1% of total forecast U. S. energy-related carbon emissions. Such a small change will have no impact whatsoever on climate, and thus have no economic benefit."*

The Hawaii Automotive Dealers Association has noted that 80% of EV cars purchased in Hawaii in 2019 were Teslas. The tenants who I develop affordable rentals for cannot afford a brand-new Nissan Leaf let alone a Tesla. They are focused on meeting their daily needs and typically are pay check to pay check.

Lastly, it is crazy to assume that EV's mean cleaner emissions especially when our State's utility still runs mostly on fossil fuels. We would be better off putting our energy and efforts on putting pressure on the State's primary utility to transition than to force housing developers to subsidize the EV automobile industry.

Jonathan Lesser, from Continental Economics, also notes that, *"Electric vehicle subsidies and mandates share an unfortunate, and all too common trait with other government policies: They're based on "conventional wisdom" that turns out to be wrong. Wealthy consumers who have purchased*



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[Schatzcollaborative.com](http://Schatzcollaborative.com)

*Teslas and Chevy Bolts primarily to signal their green bona fides for their friends and neighbors, and who have socialized many of the costs of their purchases to those who are less well-off, might wish to take a closer look at the numbers. Their hands may not be quite so clean as they believe."*

Thank you again for the opportunity to submit this proposal. If there are any questions, or if additional information is needed, please do not hesitate to contact me at (808)428-8717.

Warmest Regards,

A handwritten signature in black ink, appearing to read "Linda Schatz".

Linda Schatz  
Principal



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Testimony to the Honolulu City Council  
City & County of Honolulu  
Committee of Zoning, Planning and Housing  
Honolulu, Hawaii 96813-3077

February 27, 2020

**Re: Bill No. 25 CD1 (2019) Relating to the Adoption of the State Energy Conservation Code**

Chair Menor, Vice-Chair Waters, and Members of the Committee,

My name is Anthony Borge, Director of Business Development with RMA Sales. We are a locally-owned and managed kamaaina company since 1961. We manufacture and distribute louver jalousie windows, security and storm screens through a network of dealers, hardware stores and contractors throughout the state of Hawaii.

The intent/purpose of the energy code is to regulate the design and construction of residential and commercial buildings for the "effective use of energy" through the adoption of the State Energy Conservation Code 2017.

The following amendment is respectfully submitted for consideration to **Bill 25 Proposed Amendments CD 2, Section 24, R401.2.1 Tropical Zone** "satisfying the following conditions":

**Delete:**

1. Not more than one half of the area of the dwelling unit is air conditioned

**Rationale:**


The majority of dwellings on Oahu are well below 2400 feet above sea level e.g. Makakilo 600 feet, Mililani 630 feet, Wahiawa 950 feet, Nuuanu 1200 feet, Tantalus 2000 feet and could qualify under the less restrictive Tropical Zone code. However, dwellings with more than 50% of their area unit air conditioned would not qualify under proposed condition #1. The deletion would allow dwellings in these areas that are able to maximize natural, passive ventilation and minimize energy consumption would be able to do so.

Hawaii is unique and is blessed with 10 climate zones. We need to continue to amend the International Energy Conservation to capitalize on our natural climate attributes to become more energy efficient and be better stewards of our natural resources.

The louver jalousie window system is the most energy-efficient window system for Hawaii. Please let the homeowner decide which window system is best suited to deliver maximum natural air flow that suits their pocketbooks and delivers efficient use of energy

Thank you.

Respectfully submitted by

  
Anthony B. Borge

# Speaker Registration/Testimony

Name	Steven Sakai
Phone	8089410577
Email	ssakai@rnsha.com
Meeting Date	02-27-2020
Council/PH Committee	Zoning
Agenda Item	Bill 25 (2019), CD1
Your position on the matter	Comment
Representing	Organization
Organization	Ronald Ho and Associates
Do you wish to speak at the hearing?	Yes
Written Testimony	
Testimony Attachment	20200226080727_Bill_25_Testimony_-_SS.PDF
Accept Terms and Agreement	1

IP: 192.168.200.67

Our firm was asked to estimate the site installation costs for Electric Vehicle (EV)-ready provisions, for a future Level 2, 32 Ampere EV charger at 25% of the parking stalls in an open-plan, parking lot for a typical multi-family development. Assuming that the EV chargers would be connected to the “common area” meter at the building’s electrical room, we estimate the site cost per building to be \$12,000 for the trench and backfill, PVC conduits, handholes and concrete encasement (\$1,500 per unit for an 8-plex building). The site work would terminate within 5’-0” of the building with the balance of the work being completed by the building contractors. EV charger provisions for the building would include upgrading the “common area” loadcenter ampacity, adding a wiring gutter, additional circuit breakers and PVC conduit extensions to the site connections. We estimate the cost per building to be \$4,000 for this work (\$500 per unit for an 8-plex building).

In addition to these direct costs, we reviewed the upgrades to the Hawaiian Electric (HE) infrastructure that might be necessary to support the EV provisioning. A typical 120-unit multi-family development, without EV provisioning, currently requires approximately 9 HE transformers or roughly 1 transformer for two buildings. Although HE is responsible to make the final determination, we anticipate that HE may decide to have 1 transformer per building, instead, and double the number of its primary distribution circuits to accommodate the additional transformers. The rationale for this assessment is that HE is responsible to support the peak demand load which, in a residential development, usually occurs during the early evening. Residential EV charging, would then likely be coincident with this normal evening peak.

We estimate that the cost for the infrastructure to support the EV provisions to be \$300,000 in both construction cost and HE cabling installation charges or approximately \$2,500 for a 120-unit development. This cost is in addition to per unit costs noted above.

Honolulu City Council

Zoning, Planning and Housing Committee

Support for Bill 25, "Relating to the Adoption of the State Energy Conservation Code"

February 27, 2020, 9:00 AM hearing

Aloha Chair Menor, Vice Chair Waters, and members of the Committee,

I am testifying in strong support of Bill 25, "Relating to the Adoption of the State Energy Conservation Code." I am specifically supporting the Administration's CD2 version which was submitted by Councilmember Elefante, although I would prefer a more stringent version of the Bill.

The bill includes important considerations that will help allow residents and workers to live and work comfortably. I think we would be foolish to think we could have a comfortable future without this bill and the efficiencies which will result. If we expect to afford a cool environment, hot water use, and private transportation then we need this bill.

I believe we must make it as easy as possible to use electric vehicles in order to reduce carbon dioxide emissions enough to meet the limits required by Hawaii Act 32 of 2017 (SB559 CD1). The requirements in this Honolulu bill to install the wiring during construction is a must to avoid extremely high cost of retrofitting after the initial construction.

I recommend more parking spaces be Electric Vehicle (EV) ready at level 2 standards than the Administrations proposed CD2, but this version of the bill is much more appropriate than alternative CD2. I expect ownership of electric cars will skyrocket, if the potential owners can find stalls in which to charge them. Without providing enough future level 2 charging stalls, it will be impossible to meet the demand.

I recently had to buy a new car and I really wanted an electric car, but I decided against this because I did not know if I would continue living in a home that allowed me to charge it. Likewise, I know many people who have made this hard choice not to buy an electric car because they were stuck in condominiums that did not have available parking stalls with chargers.

The requirements in the Administration's CD2 will also ensure that water heating takes advantage of renewable energy. We are told that the alternative CD2 will provide home owners more choice, but home owners and renters will typically not have this choice. The developer or contractor will save a little up-front cost, but the occupants will discover they are paying much more to own and operate the gas water heater than they would for a solar or heat pump system.

I am very grateful that the Office of Climate Change, Sustainability and Resiliency (CCSR) went to great lengths to engage a wide array of stakeholders with differing views so as to help produce Councilmember Elefante's current CD2. One of the many adjustments to this version of the bill resulted by yielding to affordable housing concerns. Considerations like this are important, but in the long-run affordable housing may become less affordable if residents of affordable housing cannot take advantage of electric cars.

The relatively inexpensive upfront investment during construction will minimize long-term energy costs for homeowners and renters alike, leading to lower overall costs to reduce greenhouse gas emissions.

As a member of the Citizens' Climate Lobby, I believe that Honolulu and the rest of the world cannot let climate change proceed unchecked. As such the United States needs to employ economic incentives to encourage households and businesses to reduce their emissions of greenhouse gases; I am especially hopeful the proposed Federal Energy Innovation and Carbon Dividend Act, which places a fee on emissions of carbon dioxide and refunds these fees to citizens, will become law. This act or a similar law such as Hawaii Senate Bill 3150 will, for good reasons, increase the cost of using fossil fuels. Therefore, to help Honolulu homeowners and renters avoid these higher energy costs, we need to provide carbon-free or low carbon options with the lowest cost possible. The Administrations proposed CD2 will do just that by significantly lowering the costs of switching to electric vehicles and solar hot water heating.

Please help make it relatively easy for homeowners and renters to adjust by passing the Administrations proposed CD2, or better yet, a more stringent, not-less stringent version of the Bill. Measures in this Bill are necessary for Honolulu to realize a sustainable future in our changing world.

Thank you,

Charles E. Cox

Manoa



February 26, 2020

Bill 25(2019): Energy Code Update

Re: Hawaii City and County of Honolulu Bill 25(2019), CD2: Introduction of EV Readiness  
Dear Chair Menor, Vice Chair Waters, and members of the Committee.

Thank you for your continued attention to Bill 25 CD2. Forth **strongly supports** the Bill 25 CD2 introduced by Council Member Elefante. Forth is a nonprofit partner to the City of Honolulu for the Bloomberg American Cities Climate Challenge with a mission to promote and support the advancement of electric mobility.

Bill 25 directly supports the Administration's commitment to transform all ground transportation to renewable fuels by 2035. It also resonates with the latest version of the International Energy Conservation Code (IECC); which is what Hawaii's state energy code is based on. Access to convenient charging is a key factor in consumers' decisions to purchase an electric vehicle (EV), according to the International Energy Agency Global EV Outlook 2017. It is paramount to create a conducive environment for EV adoption by putting the EV charging infrastructure in place.

Bill 25 CD2 introduced by Council Member Elefante is a prudent and thoughtful proposal that strikes the balance between vision and practicality. With the requirement for a minimum of level 2 charging and a points pathway system to enable building developers greater flexibility, it will provide the needed level of electrical infrastructure without overly burdening the developers. Furthermore, considering the lower-income communities will be most benefited from electric transportation, the reduced EV Readiness requirement for affordable housing instead of a total exemption is a considerate decision that ensures the affordable housing occupants' access to charging infrastructure.

Forth's experience has been that addressing and planning for electric transportation early can lead to an acceleration in the implementation of EV charging infrastructure, EV ownership and use. Costs for such efforts, according to our partners in the building and trade sectors, can be de minimis and should not detract from the overall benefits from such action. Best practices such as these are being implemented around the country and stand out as one of the easiest ways to support a long-term transition to electric transportation.

If you have any questions about this engagement or Forth's role please don't hesitate to reach out.

Best,

A handwritten signature in blue ink that reads 'Zach Henkin'.

Zach Henkin  
Deputy Director, Forth  
503.803.3036



COMMERCIAL REAL ESTATE  
DEVELOPMENT ASSOCIATION

HAWAII CHAPTER

February 26, 2020

The Honorable Ron Menor, Chair  
The Honorable Tommy Waters, Vice Chair  
Members of the Committee on Zoning  
Planning and Housing  
City Council, City and County of Honolulu  
Honolulu, Hawaii 96813-3077

**RE: Bill 25 (2019) – RELATING TO THE ENERGY CODE**  
**Hearing date: February 25, 2020 at 9:00 am**

Aloha Chair Menor and Members of the Committee on Zoning, Planning and Housing.

Mahalo for the opportunity to submit testimony on behalf of NAIOP Hawaii offering comments to Bill 25 (2019), CD1, as well as proposed amendments. NAIOP Hawaii is the local chapter of the nation's leading organization for office, industrial, retail, residential and mixed-use real estate. NAIOP Hawaii has over 200 members in the State including local developers, owners, investors, asset managers, lenders and other professionals.

NAIOP Hawaii is generally supportive of the City & County's efforts to promote sustainability. We are, however, concerned with the tremendous burden an additional mandate places on the cost of building homes in Hawaii, especially affordable housing.

Bill 25, CD1 seeks to adopt the Energy Code with certain amendments. Among those amendments is a mandate for electric vehicle infrastructure. Hawaii's residents and businesses are already among the most heavily taxed in the entire country. The real estate development and construction industries are two of the biggest drivers of the entire State economy. There are already significant development mandates which increase the cost of building residential units, which has significantly exacerbated the lack of affordable housing in Hawaii.

In addition, while EV infrastructure mandates in the the original and CD1 versions of Bill 25 (2019) apply only to new residential and commercial buildings, the proposed CD2 cited in the agenda for today's meeting apply these provisions to both new and existing residential and commercial buildings. Because operating funds (instead of debt financing) are typically used for parking facility maintenance and up-grade projects for

The Honorable Ron Menor, Chair  
Members of the Committee on Zoning  
Planning and Housing  
February 26, 2020  
Page 2

existing facilities, the inclusion of an EV infrastructure where additional parking stalls may be added will likely create additional budgetary challenges, preventing upgrades.

If an EV infrastructure mandate must be included, NAIOP Hawaii supports the points-based system proposed in Councilmember Kobayashi's proposed CD2, with an exemption for affordable housing units offered for sale or rent to households earning between 80 and 140 percent of the area median income and only applicable to new residential and commercial buildings.

Finally, the solar water heating requirements in the current draft of Bill 25, CD1 should be amended to mirror the state mandate for consistency. While we support the intent of this provision, NAIOP has offered language to provide greater flexibility to developers under certain circumstances.

In order to keep the cost of housing from spiraling out of control, the City should resist the urge to place additional costs on development. For these reasons, we urge you to amend Bill 25, CD1 to include the revisions in Councilmember Kobayashi's proposed CD2.

Mahalo for your consideration,

Catherine Camp, President  
NAIOP Hawaii

# Speaker Registration/Testimony

Name Ileana INg  
 Phone 7862668488  
 Email ileanai@hawaii.edu  
 Meeting Date 01-30-2020  
 Council/PH  
 Committee Zoning  
 Agenda Item Bill 25  
 Your position  
 on the matter Support  
 Representing Self  
 Organization  
 Do you wish  
 to speak at the No  
 hearing?

Aloha Members of the Committee,

Written  
Testimony

My name is Ileana Ing and I have lived in Honolulu for about 4 consecutive years. I am writing to you to discuss my reasons for supporting Bill 25. Bill 25 which promotes the requirement of new buildings to have EV charging stations and solar water heaters is a step in a new way of living. Solar water heaters replaces heaters that run off of fossil fuels. We must move away from fossil fuels. I have adopted this practice by having solar water heaters at my house and driving an electric vehicle. The promotion of installing EV charging stations in new buildings is slowly adopting the changes of gas cars to electric cars. Electric cars are much better for the environment as they do not produce CO2 emissions. Promoting these practices of solar water heating and EV charging stations will definitely improve our way of living and our movement from fossil fuels. I hope to see more changes with our infrastructure and using more renewable energy resources. Mahalo for reading my testimony.

Testimony  
Attachment

Accept Terms  
and 1  
Agreement

IP: 192.168.200.67

# Speaker Registration/Testimony

Name	Lo kaimuloa
Phone	808-3962122
Email	lokaimuloa@gmail.com
Meeting Date	02-27-2020
Council/PH Committee	Zoning
Agenda Item	Bill 25
Your position on the matter	Support
Representing	Self
Organization	
Do you wish to speak at the hearing?	No
Written Testimony	Do things correctly in the beginning and you will not need to fix it later. This bill will make that happen in our building industries future .
Testimony Attachment	
Accept Terms and Agreement	1

IP: 192.168.200.67

# Speaker Registration/Testimony

Name	Marcia Kemble
Phone	808-941-6453
Email	mkemble@hawaii.rr.com
Meeting Date	02-27-2020
Council/PH Committee	Zoning
Agenda Item	Bill 25, A BILL FOR AN ORDINANCE RELATING TO THE ADOPTION OF THE STATE ENERGY CONSERVATION CODE
Your position on the matter	Support
Representing Organization	Self
Do you wish to speak at the hearing?	No
Written Testimony	I STRONGLY support this bill! It is just essential that everyone in Hawaii do everything possible in the coming years/decades to mitigate the existential threat posed by climate change. Please do the right thing and vote for this bill.
Testimony Attachment	
Accept Terms and Agreement	1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 7:16 AM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Lois Crozer  
Phone 8082268313  
Email lbc@hawaiiantel.net  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item bill 25  
Your position on the matter Support  
Representing Self  
Organization

Do you wish to speak at the hearing? No

Written Testimony We need to act on climate change now. The building lobby fights for short term profits. We need to balance these with the health of our island. We have ample sunshine, let's use it. Let's work together for all and not those who want to make a quick buck and move on to the next project.

Testimony Attachment

Accept Terms and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 6:49 AM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Suzanne Egan  
Phone 808-321-3072  
Email segan808@gmail.com  
Meeting Date 02-27-2019  
Council/PH Committee Zoning  
Agenda Item Bill 25  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

Written  
Testimony

This bill is an important move towards our energy goals. We all know that shift from fossil fuels is a challenging commitment. And as a community, YOU HEAR OUR VOICES, local and global, we have made that commitment. Please stay focused on the big picture. Please remain steadfast. Pushbacks from those w business interest are to be expected. You, as our leadership, are obligated to make the best choices for the future of community at large. I speak for our children. Please support Bill 25.

Testimony  
Attachment

Accept Terms and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 6:35 AM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Daniel C Smith  
Phone 8084628346  
Email dancsmith@rocketmail.com  
Meeting Date 02-27-2020  
Council/PH Zoning  
Committee  
Agenda Item Item 11  
Your position on the Support  
matter  
Representing Self  
Organization self  
Do you wish to No  
speak at the hearing?

Written Testimony CD2 introduced by Councilmember Elefante is a good idea and a reasonable compromise in the the face of global warming. Also, solar water heading and PV make sense economically even if there were no threat. People understand the value of a little investment upfront to save money in the long run. Collectively, we do our little parts to save the earth.

Testimony  
Attachment

Accept Terms and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 5:46 AM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Meredith Buck  
Phone 8087698444  
Email mbucknova@gmail.com  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item Item 11  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No  
Written Testimony  
Testimony Attachment  
Accept Terms and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 5:29 AM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Carolynn Bell-Tuttle  
Phone 8087784226  
Email carolynn.bell@gmail.com  
Meeting Date 02-27-20yy  
Council/PH Committee Zoning  
Agenda Item 11  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No  
Written Testimony  
Testimony Attachment  
Accept Terms and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 5:24 AM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Richard Camp  
Phone 8087474685  
Email rick\_camp@hotmail.com  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item 11  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No  
Written Testimony  
Testimony Attachment  
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Bill 25 is a weak compromise between Hawaii Gas, building groups, and environmental groups that heavily favors building groups. At the very least Bill 26 should require new roofs to be "solar-ready," to combat climate change.

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 5:24 AM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name	Victoria Anderson
Phone	8083679296
Email	vanderso@hawaii.edu
Meeting Date	02-27-2020
Council/PH Committee	Zoning
Agenda Item	11
Your position on the matter	Support
Representing	Self
Organization	
Do you wish to speak at the hearing?	No
Written Testimony	
Testimony Attachment	
Accept Terms and Agreement	1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 4:05 AM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Nancy  
Phone 8083527559  
Email Pipermbm@gmail.com  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item 11  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

Written  
Testimony

This is one small step that needs to happen now. After a year of testimony, this needs to pass. It amounts to one small teeny tiny bite to home and condo buyers which will realize large payoffs to the consumer in terms of energy bills. Hawaii has much to lose from climate change and we must stop dragging our feet. Let's do our part for Hawaii and the world!

Testimony  
Attachment

Accept Terms and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Monday, February 24, 2020 6:33 PM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Kim Jorgensen  
Phone 415-845-5495  
Email hawaiiicondo@yahoo.com  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item Bill 25  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

Written Testimony I SUPPORT Bill 25; and would support it even more if it required a minimum of 50% of all parking spaces to be EV charging ready for the fastest charging outlets and no way to negotiate to a lower percentage.

Don't be afraid of the future or of the developers who are kicking and screaming their way into it!

Testimony  
Attachment

Accept Terms and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Monday, February 24, 2020 6:28 PM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Denise Boisvert  
Phone 415-845-5495  
Email infofordenise@yahoo.com  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item Bill 25  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

I would have an EV in a heartbeat; but my condo building built in 1966 obviously isn't equipped for such an eco-friendly alternative vehicle. And, unfortunately, it would cost dearly to somehow install all that would be needed to be able to charge at my parking space.

Without planning for a future filled with affordable Tesla and other EV cars, you are forcing the next several generations of residents to be burdened with that same retro-fitting cost.

Written  
Testimony

One thing that I really was disappointed in hearing during the February 6, Zoning Committee meeting had to do with ways to decrease the number of parking spaces with charging availability with some sort of point system that reminded me of carbon credits. It allowed a drastically reduced number of parking spaces if the developer puts only one of the quick-charging outlets; which would force cars to have to be parked for several hours instead of a much shorter time.

That seemed to me to be caving to the developers who obviously want to do as little as possible to accommodate the future.

Bill 25 needs to have an abundance of futuristic bells & whistles! Make it as full strength as possible and NOT a watered-down version because - as we all know - we mustn't waste water!!

Testimony  
Attachment  
Accept Terms and Agreement 1

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 8:04 AM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Nanea Lo  
Phone 8084543504  
Email naneaclo@gmail.com  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item Agenda Item #11  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

Hello,

My name is Nanea Lo. I am a lifelong resident of Hawai'i on O'ahu. I am writing in support of Agenda Item #11. Bill 25 is a meager measure. It is a baby step toward fighting climate change. It should be far stronger. How will the world ever reverse our climate breakdown when passing even such a timid bill takes so much time, energy, and patience?

Written Testimony The entire process of hearings and testimony for Bill 25 has been discouraging, sad, disappointing, frustrating, and immensely inconvenient to those of us seeking climate justice and a cleaner O'ahu.

Please pass Bill 25, finally. Then start working on legislation at the level of the crisis we are in.

me ke aloha 'āina,  
Nanea Lo

Testimony  
Attachment

Accept Terms and Agreement 1

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 7:52 AM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Harald Ebeling  
Phone 808 9881605  
Email haraldebeling@gmail.com  
Meeting Date 02-06-2020  
Council/PH Committee Zoning  
Agenda Item Bill 25  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

Aloha kākou!

Written Testimony I am writing to express my disappointment and alarm about the fact that this bill still has not been passed. STRONG support for energy-saving, green building laws and regulations should be a high priority of everyone, including the CC. Solar hot water, PV, EV-ready homes are all no-brainers.

This is not the time to delay, water down, or weaken in other ways any measure that helps us move forward into a more sustainable future for our keiki - away from fossil fuels!

Mahalo,  
Harald

Testimony  
Attachment  
Accept Terms and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 9:14 AM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Natalie Haneberg  
Phone 8086390817  
Email natalie.haneberg@yahoo.com  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item Agenda item 11  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

Council members,

Please consider supporting bill 25. We have to do more to address climate change, and it would make a difference if the city and county of Honolulu began to address it.

Written  
Testimony

1) The majority of Honolulu citizens support doing some actions against climate change.  
2) In the past 2 years or so, I have noticed a huge shift in people believing that climate change exists and is affecting us NOW. I live on Kauai, and the amount of extreme weather events we've had in 2 years alone has convinced many people. It's time to start addressing it before it's too late.  
3) As it continues to get hotter and hotter, shouldn't we have cutting edge energy-efficient buildings in Honolulu, or continue to pour money into old technology that is less efficient? I'd rather see my state capitol considered ahead of the pack, but we are behind.  
I purchased a solar water heater for my home in 2015. I did not apply for any tax credits for it, although I could have. My electric bill, before the new heater, would average anywhere from \$350-\$500 (large family). It now is as low as \$150-250. I have already paid off my loan for the heater, using the difference between my old average and whatever the monthly cost has as a payment toward my loan. So I now have much cheaper electric bills. Why wouldn't we want to extend this OPTION to others?

Thank you for your time in this matter,  
Natalie Haneberg

Testimony  
Attachment

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 8:42 AM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Helen Raine  
Phone 8082946626  
Email helenraine1@gmail.com  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item bill 25, agenda 11  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

Written  
Testimony

It is impossible to overstate how serious a threat climate change is to our islands, our way of life and to the ecosystems on our planet. This bill does not go anywhere near far enough to addressing climate change, but it is at least a step in the right direction. We are going to be battered by sea level rise, erosion, flooding, changes in rainfall patterns. It is happening already. The legislature MUST start to take this seriously and actively push for real and lasting change. History will judge us for what we do in the next ten years. In the case of this bill, it's not enough but it's better than nothing. Let's pass it and get moving on other critical work towards becoming carbon neutral. Helen Raine.

Testimony  
Attachment

Accept Terms and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 9:18 AM  
**Subject:** Budget Speaker Registration/Testimony

## Speaker Registration/Testimony

Name michael krijnen  
Phone 8084922224  
Email architects911@gmail.com  
Meeting Date 02-26-2020  
Council/PH Committee Budget  
Agenda Item Bill 25  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

Written  
Testimony

It is a forgone conclusion that benefits from the use of EV's and electrical energy-saving devises together with future preparedness work for climate change adaption, will benefit Hawaii in the future. Just do it right, the outlay and cost of investing in future cost savings right now, using the best design for climate change priorities has to be employed, politics has taken long enough, you all can't be that dumb. Pass the bill.

Testimony  
Attachment

Accept Terms and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 9:32 AM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name	Raelyn Reyno Yeomans
Phone	7024431253
Email	raebudden@aol.com
Meeting Date	02-27-2020
Council/PH Committee	Zoning
Agenda Item	Bill 25, Agenda Item 11
Your position on the matter	Support
Representing	Self
Organization	
Do you wish to speak at the hearing?	No
Written Testimony	Strong Support!
Testimony Attachment	
Accept Terms and Agreement	1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 9:44 AM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Cheryl Reeser  
Phone 8082140086  
Email joelypop@gmail.com  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item 11  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

Aloha,

Written Testimony Please support Agenda Item 11. Although I am a Maui County resident, Honolulu City Council has the opportunity to set precedent throughout the State of Hawaii.

Mahalo for your consideration.

Testimony Attachment  
Accept Terms and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 10:15 AM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Burt Furuta  
Phone 8085336642  
Email bfuruta@hawaii.rr.com  
Meeting Date 02-27-2020  
Council/PH  
Committee Zoning  
Agenda Item Bill 25  
Your position on  
the matter Support  
Representing Self  
Organization  
Do you wish to  
speak at the  
hearing? No

Written  
Testimony

I hope you actually vote on Bill 25 this time. It is a baby step in the right direction. The opposition argues that it will raise housing costs, but sometimes we NEED to pay more up front in order to pay less in the long run. It is a wise investment that will pay for itself and actually save money, compared to addressing these issues later. We are already behind in preparing for climate change. Future costs will be overwhelming if we keep putting them off. Do the right thing and pass this bill.

Testimony  
Attachment

Accept Terms and  
Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 10:34 AM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Lisa Hallett  
Phone (808)8963354  
Email Lisa.andrews851@gmail.com  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item 11  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

Written  
Testimony

Please let it be part of your legacy to pass this legislation today so that it will help to ease the pain of future generations living on a planet that we have abused. We all should be doing the most that we can do to slow down climate change. This could be your little part and in turn many people's future contribution to slow the effects of climate change. May God bless you for your generosity and your love for the next generations.

Testimony  
Attachment

Accept Terms  
and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 10:42 AM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Katherine Ray  
Phone 808-271-5778  
Email katherine.a.ray@gmail.com  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item Bill 25 - Agenda Item 11  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

It is time to finally vote on Bill 25 and make your public positions known in advance of elections later this year.

After a year in Committee, working through multiple drafts, the necessary compromises have been made and the fine points have been resolved. No further debate or study is required - just action.

Written Testimony Yes, creating the infrastructure for improved energy efficiency in our buildings and transportation systems has a cost. Yes, these improvements will marginally increase upfront home costs. But over the lifetime of homeownership, there's a guaranteed payback in terms of lower energy bills and a potential payback for any family that chooses now - or later - to convert to an electric or hybrid vehicle.

Knowing that the costs of retrofitting infrastructure are significantly higher, and knowing that there is a guaranteed return to the homeowner, why would you vote no?

Please support this bill and get it out of Committee so that it can be voted on by the full Council.

Testimony  
Attachment  
Accept Terms and Agreement

1

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 11:06 AM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Griffith Jurgens  
Phone 8087530960  
Email gjurgens12@gmail.com  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item Support for Bill 25  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

Aloha Chair Menor, Vice Chair Waters, and members of the Committee,

I am testifying in strong support of Bill 25, "Relating to the Adoption of the State Energy Conservation Code."

We have made commitments in Hawaii to be 100% clean energy and 100% clean transportation. We are at a critical point in the climate crisis and need bold measures to help us attain these goals. Watering down bills is not going to move us fast enough to negate the inevitable damage that looms.

Written Testimony This measure should ensure that new homes come equipped with either solar or high-efficiency water heaters, helping to close the loophole that has allowed thousands of fossil gas water heaters to be installed in recent housing.

Finally, Bill 25 helps Honolulu make the transition to zero-emission vehicles by requiring that a certain percentage of new parking stalls be "EV-ready" (with wiring and capacity for EV chargers to be installed). This will help to make electric vehicles more accessible to residents and reduce the overall cost of our transition to clean transportation.

This provision should be strengthened significantly, however. I respectfully request that the Committee adopt the Level 2 charging infrastructure requirements in the proposed CD2, but retain the requirement for 25% (or more) EV ready across commercial and multi-family construction. I am concerned that the proposed 'points system' will fall far short in providing the infrastructure needed to ensure a low-cost transition to clean mobility in the

near future—or worse, it will lead to gaming by the developers. Please follow the lead of dozens of other cities and simply set a percentage requirement for EV readiness.

Hawaii is a clean energy leader to not only the pacific islands and mainland USA, but the entire world. We need to demonstrate what can be done so others will follow suit.

Thank you for considering my testimony.

Griffith Jurgens  
Honolulu, HI 96816

Testimony  
Attachment  
Accept Terms and 1  
Agreement

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 10:54 AM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Matt L  
Phone 8089490003  
Email mattcalloing@gmail.com  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item Bill 25 Relating to the Adoption of the State Energy Conservation Code  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

Aloha Chair Menor, Vice Chair Waters, and members of the Committee,

I am testifying in strong support of Bill 25, "Relating to the Adoption of the State Energy Conservation Code."

This is a critical clean energy and climate measure that would modernize the City & County of Honolulu's (Honolulu's) building energy code. This modernization updates Honolulu's existing building energy code—which is nearly fourteen years out of date—to increase occupant health and comfort while significantly reducing energy use for new homes and buildings. The proposed code revision reflects broad changes in technology, building materials, and best practices, while considering Honolulu's unique island and building environment.

Written  
Testimony

In addition, this measure should ensure that new homes come equipped with either solar or high-efficiency water heaters, helping to close the loophole that has allowed thousands of fossil gas water heaters to be installed in recent housing.

Finally, Bill 25 helps Honolulu make the transition to zero-emission vehicles by requiring that a certain percentage of new parking stalls be "EV-ready" (with wiring and capacity for EV chargers to be installed). This will help to make electric vehicles more accessible to residents and reduce the overall cost of our transition to clean transportation.

This provision should be strengthened significantly, however. I respectfully request that the Committee adopt the Level 2 charging infrastructure requirements in the proposed CD2, but

retain the requirement for 25% (or more) EV ready across commercial and multi-family construction. I am concerned that the proposed 'points system' will fall far short in providing the infrastructure needed to ensure a low-cost transition to clean mobility in the near future—or worse, it will lead to gaming by the developers. Please follow the lead of dozens of other cities and simply set a percentage requirement for EV readiness.

Thank you for considering my testimony.

[Sign your full name, and list your city, state and zip code]

#### INSTRUCTIONS FOR CITY COUNCIL TESTIMONY SUBMISSIONS:

Please submit testimony BY THE END OF THE DAY WEDNESDAY, FEBRUARY 26th. Submit your written testimony through the Council's online form.

To speak at the public hearing, check the 'yes' box for the question "Do you wish to speak at the hearing?" on the online form. You can also call 768-3819 to register or fill out a registration form before the start of the 9 a.m. committee hearing.

This is a no brainer for many reasons. The 2045 100% renewable initiative, the rise of the voting bloc who support this type of legislation, your conscience.

Testimony  
Attachment  
Accept Terms and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 10:01 AM  
**Subject:** Public Infrastructure, Technology and Sustainability Speaker Registration/testimony

## Speaker Registration/Testimony

Name Dr. Lorna Holmes  
Phone 5176104048  
Email lholmes@hillsdale.edu  
Meeting Date 02-27-2020  
Council/PH Committee PITS  
Agenda Item Agenda item 11  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

Written Testimony It is essential that we do everything we can to switch our infrastructure to being green and sustainable. This bill helps move us in the right direction. The only people arguing against it are real estate people who are concerned with their profits. Council, please look out for the common good.

Testimony  
Attachment  
Accept Terms and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 11:29 AM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Madeline McKenna  
Phone 6503364468  
Email maddy@mckennas.com  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item Bill 25  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

### Written Testimony

As an island chain in the middle of the Pacific and away from quick and reliable mainland support, I believe we have to do everything possible in our beautiful State of Hawai'i to build resiliency to natural disasters and what may eventually come of climate change. I was appalled to learn that Honolulu is ranked as the entire US NATION's 4th-WORST city at encouraging energy-efficient buildings. With such plentiful solar resources and with the constant importation of fossil fuels needed to meet our energy consumption out here, we absolutely MUST do better at encouraging energy efficiency. In the Honolulu Star-Advertiser, where I read this information, they also stated that over 90% of the written testimony for this bill is in support! The people of Honolulu clearly want cleaner energy and energy efficiency, and the ZPH needs to pass Bill 25 to make a plan for this to happen.f I sincerely thank you for your consideration of this testimony.

Testimony Attachment  
Accept Terms and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 11:32 AM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Adriann Gin  
Phone 8085448960  
Email agin@hawaiiidata.org  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item Support for Bill 25, "Relating to the Adoption of the State Energy Conservation Code"  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

Aloha Chair Menor, Vice Chair Waters, and members of the Committee,

I am testifying in strong support of Bill 25, "Relating to the Adoption of the State Energy Conservation Code."

### Written Testimony

This is a critical clean energy and climate measure that would modernize the City & County of Honolulu's (Honolulu's) building energy code. This modernization updates Honolulu's existing building energy code—which is nearly fourteen years out of date—to increase occupant health and comfort while significantly reducing energy use for new homes and buildings. The proposed code revision reflects broad changes in technology, building materials, and best practices, while considering Honolulu's unique island and building environment.

In addition, this measure should ensure that new homes come equipped with either solar or high-efficiency water heaters, helping to close the loophole that has allowed thousands of fossil gas water heaters to be installed in recent housing.

Finally, Bill 25 helps Honolulu make the transition to zero-emission vehicles by requiring that a certain percentage of new parking stalls be "EV-ready" (with wiring and capacity for EV chargers to be installed). This will help to make electric vehicles more accessible to residents and reduce the overall cost of our transition to clean transportation.

This provision should be strengthened significantly, however. I respectfully request that the Committee adopt the Level 2 charging infrastructure requirements in the proposed CD2, but

retain the requirement for 25% (or more) EV ready across commercial and multi-family construction. I am concerned that the proposed 'points system' will fall far short in providing the infrastructure needed to ensure a low-cost transition to clean mobility in the near future—or worse, it will lead to gaming by the developers. Please follow the lead of dozens of other cities and simply set a percentage requirement for EV readiness.

Thank you for considering my testimony.

Adriann Gin, Honolulu, HI 96821

Testimony

Attachment

Accept Terms and  
Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 11:41 AM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name	Mark Wilson
Phone	808-955-1882
Email	mkw@hawaiiantel.net
Meeting Date	02-27-2020
Council/PH Committee	Zoning
Agenda Item	11
Your position on the matter	Support
Representing	Self
Organization	
Do you wish to speak at the hearing?	No
Written Testimony	
Testimony Attachment	
Accept Terms and Agreement	1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 1:07 PM  
**Subject:** Public Infrastructure, Technology and Sustainability Speaker Registration/testimony

## Speaker Registration/Testimony

Name	Deborah Wallace
Phone	8083482519
Email	1happygyrl@gmail.com
Meeting Date	02-27-20yy
Council/PH Committee	PITS
Agenda Item	Bill 25
Your position on the matter	Support
Representing	Self
Organization	
Do you wish to speak at the hearing?	No
Written Testimony	It is crucial that we do everything that we can to become 100% sustainable.
Testimony Attachment	
Accept Terms and Agreement	1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 12:35 PM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Amanda Ellis  
Phone 8084764504  
Email Ellisa@eastwestcenter.org  
Meeting Date 02-27-2020  
Council/PH Zoning  
Committee  
Agenda Item Bill 25  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

Aloha Chair Menor and members of the committee,

Written  
Testimony

My name is Amanda Ellis and I live in Manoa. I am writing in support of Bill 25(2019) CD2, introduced by Councilmember Elefante. I believe Honolulu needs to create policies to update our outdated energy and building codes to be climate resilient while also providing affordable energy efficient options accessible to all of O'ahu's residents. Research shows that making new structures more energy efficient with solar water heaters and PV and EV capabilities built-in (instead of retrofitting structures) will save homes and businesses money over time. The passage of this bill, demonstrates that solution-oriented climate resilient policy can be cost-effective and prioritizes the health and wellbeing of residents and the environment. Please don't be misled by special interest groups but make policy with the good of the community and our planet at heart. We can not afford not to do this and the faster the better!

Mahalo for the opportunity to voice support of Bill 25(2019) CD2.

Sincerely, Amanda Ellis

Testimony  
Attachment  
Accept Terms and Agreement 1

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 12:53 PM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name	Kenneth Eisner
Phone	7608770212
Email	ken_eisner@yahoo.com
Meeting Date	02-27-2020
Council/PH Committee	Zoning
Agenda Item	Bill 25
Your position on the matter	Support
Representing	Self
Organization	
Do you wish to speak at the hearing?	No
Written Testimony	
Testimony Attachment	
Accept Terms and Agreement	1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 12:58 PM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name	Judy Bishop
Phone	8088392200
Email	jbishop@bishopco.net
Meeting Date	02-27-2020
Council/PH Committee	Zoning
Agenda Item	Bill 25
Your position on the matter	Support
Representing	Self
Organization	
Do you wish to speak at the hearing?	No
Written Testimony	
Testimony Attachment	
Accept Terms and Agreement	1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 12:23 PM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Richard Furst  
Phone 8083088925  
Email RFURST808@GMAIL.COM  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item Bill 25, "Relating to the Adoption of the State Energy Conservation Code"  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

Aloha Chair Menor, Vice Chair Waters, and members of the Committee,

I am testifying in strong support of Bill 25, "Relating to the Adoption of the State Energy Conservation Code."

This is a critical clean energy and climate measure that would modernize the City & County of Honolulu's (Honolulu's) building energy code. This modernization updates Honolulu's existing building energy code—which is nearly fourteen years out of date—to increase occupant health and comfort while significantly reducing energy use for new homes and buildings. The proposed code revision reflects broad changes in technology, building materials, and best practices, while considering Honolulu's unique island and building environment.

Written  
Testimony

In addition, this measure should ensure that new homes come equipped with either solar or high-efficiency water heaters, helping to close the loophole that has allowed thousands of fossil gas water heaters to be installed in recent housing.

Finally, Bill 25 helps Honolulu make the transition to zero-emission vehicles by requiring that a certain percentage of new parking stalls be "EV-ready" (with wiring and capacity for EV chargers to be installed). This will help to make electric vehicles more accessible to residents and reduce the overall cost of our transition to clean transportation.

This provision should be strengthened significantly, however. I respectfully request that the Committee adopt the Level 2 charging infrastructure requirements in the proposed CD2, but

retain the requirement for 25% (or more) EV ready across commercial and multi-family construction. I am concerned that the proposed 'points system' will fall far short in providing the infrastructure needed to ensure a low-cost transition to clean mobility in the near future—or worse, it will lead to gaming by the developers. Please follow the lead of dozens of other cities and simply set a percentage requirement for EV readiness.

Thank you for considering my testimony.

Sincerely,

Richard A. Furst, AIA  
Aina Haina

Testimony  
Attachment

Accept Terms  
and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 1:13 PM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name	Karma Hill
Phone	8083445555
Email	karma@karmahill.com
Meeting Date	02-27-2020
Council/PH Committee	Zoning
Agenda Item	Bill 25
Your position on the matter	Support
Representing	Self
Organization	
Do you wish to speak at the hearing?	No
Written Testimony	
Testimony Attachment	
Accept Terms and Agreement	1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 1:11 PM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Peter Forman  
Phone 8082618502  
Email purchases@wecanfly.com  
Meeting Date 02-26-2020  
Council/PH Committee Zoning  
Agenda Item Bill 25  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

Dear Chair Menor, Vice Chair Waters, and members of the committee,

Bill 25 is an essential change to billing codes that recognizes the very substantial transition to electric vehicles that has already begun.

Written  
Testimony

Opponents to this bill suggest that it is too expensive to implement. Nothing could be further from the truth. Bill 25 requires a small amount of "EV Ready" wiring and conduit to be installed in certain projects. Most projects approved in the future will need to deal with electric vehicles, which are selling quickly in Hawaii. If that wiring and conduit is not pre-installed, the cost of installing the wiring at a later date is many times more expensive. Efforts to avoid preparing for electric vehicles are penny smart but pound foolish.

Please, for the sake of the people who work or live in these future projects, pass Bill 25 so that a much overdue overhaul of building codes can take place.

Sincerely,  
Peter Forman, EV owner

Testimony  
Attachment  
Accept Terms and Agreement 1

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 1:39 PM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Brandon Kennedy  
Phone 7275972247  
Email B-kennedy.1@onu.edu  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item Bill 25  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

Written  
Testimony

Hello, I'm actually moving to Honolulu in about three months, which is very exciting because this is a lifelong goal. The one hesitation I have with moving to Honolulu is my fear about how I will charge my EV. In the continental US, you're able charge your EV in the garage of your home. When I move to Honolulu I will have to rent an apartment or condo, which is a worrisome prospect since I don't know how I'll manage my life around the need to find an EV charger. My hope is that the committee will adopt the level 2 requirements in the proposed CD2 but keep the imperative for 25% more EV ready for commercial and multifamily construction. Thank you!

Testimony  
Attachment

Accept Terms and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 1:56 PM  
**Subject:** Public Infrastructure, Technology and Sustainability Speaker Registration/testimony

## Speaker Registration/Testimony

Name Angela Posatiere  
Phone 8082630273  
Email [angela@myartmail.com](mailto:angela@myartmail.com)  
Meeting Date 02-27-2020  
Council/PH Committee PITS  
Agenda Item Bill 25  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No  
Written Testimony  
Testimony Attachment  
Accept Terms and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 1:39 PM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Ronald FitzGerald  
Phone 8082633363  
Email ron.fitzgerald@juno.com  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item HB25  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

Honolulu City Council  
Zoning, Planning and Housing Committee  
Support for Bill 25, "Relating to the Adoption of the State Energy Conservation Code"  
February 27, 2020, 9:00 AM hearing

Aloha Chair Menor, Vice Chair Waters, and members of the Committee,

I am testifying in strong support of Bill 25, "Relating to the Adoption of the State Energy Conservation Code."

Written  
Testimony

This is a critical clean energy and climate measure that would modernize the City & County of Honolulu's (Honolulu's) building energy code. This modernization updates Honolulu's existing building energy code—which is nearly fourteen years out of date—to increase occupant health and comfort while significantly reducing energy use for new homes and buildings. The proposed code revision reflects broad changes in technology, building materials, and best practices, while considering Honolulu's unique island and building environment.

In addition, this measure should ensure that new homes come equipped with either solar or high-efficiency water heaters, helping to close the loophole that has allowed thousands of fossil gas water heaters to be installed in recent housing.

Finally, Bill 25 helps Honolulu make the transition to zero-emission vehicles by requiring that a certain percentage of new parking stalls be "EV-ready" (with wiring and capacity for

EV chargers to be installed). This will help to make electric vehicles more accessible to residents and reduce the overall cost of our transition to clean transportation.

This provision should be strengthened significantly, however. I respectfully request that the Committee adopt the Level 2 charging infrastructure requirements in the proposed CD2, but retain the requirement for 25% (or more) EV ready across commercial and multi-family construction. I am concerned that the proposed 'points system' will fall far short in providing the infrastructure needed to ensure a low-cost transition to clean mobility in the near future—or worse, it will lead to gaming by the developers. Please follow the lead of dozens of other cities and simply set a percentage requirement for EV readiness.

I Believe that these changes will help bring Honolulu into a Green Energy Future and an Oil free State. Thank you for considering my testimony.

Ronald FitzGerald CMD

Testimony

Attachment

Accept Terms and  
Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 1:32 PM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Kamal Kapadia  
Phone 8083484661  
Email kamal.kapadia@gmail.com  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item Bill 25  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

Honolulu City Council  
Zoning, Planning and Housing Committee  
Support for Bill 25, "Relating to the Adoption of the State Energy Conservation Code"  
February 27, 2020, 9:00 AM hearing

Aloha Chair Menor, Vice Chair Waters, and members of the Committee,

I am testifying in strong support of Bill 25, "Relating to the Adoption of the State Energy Conservation Code."

Written  
Testimony

This is a critical clean energy and climate measure that would modernize the City & County of Honolulu's (Honolulu's) building energy code. This modernization updates Honolulu's existing building energy code—which is nearly fourteen years out of date—to increase occupant health and comfort while significantly reducing energy use for new homes and buildings. The proposed code revision reflects broad changes in technology, building materials, and best practices, while considering Honolulu's unique island and building environment.

In addition, this measure should ensure that new homes come equipped with either solar or high-efficiency water heaters, helping to close the loophole that has allowed thousands of fossil gas water heaters to be installed in recent housing.

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EV chargers to be installed). This will help to make electric vehicles more accessible to residents and reduce the overall cost of our transition to clean transportation.

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Thank you for considering my testimony.

Kamal Kapadia  
Resident of Honolulu, Hawaii 96816

Testimony  
Attachment  
Accept Terms and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 2:15 PM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Casey Pelkey  
Phone 8086838816  
Email casey.pelkey@gmail.com  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item Support for Bill 25, "Relating to the Adoption of the State Energy Conservation Code"  
Your position on the matter Support  
Representing Self  
Organization CP Consulting  
Do you wish to speak at the hearing? No

Aloha Chair Menor, Vice Chair Waters, and members of the Committee,

I am testifying in strong support of Bill 25, "Relating to the Adoption of the State Energy Conservation Code."

Written  
Testimony

This is a critical clean energy and climate measure that would modernize the City & County of Honolulu's (Honolulu's) building energy code. This modernization updates Honolulu's existing building energy code—which is nearly fourteen years out of date—to increase occupant health and comfort while significantly reducing energy use for new homes and buildings. The proposed code revision reflects broad changes in technology, building materials, and best practices, while considering Honolulu's unique island and building environment.

In addition, this measure should ensure that new homes come equipped with either solar or high-efficiency water heaters, helping to close the loophole that has allowed thousands of fossil gas water heaters to be installed in recent housing.

Finally, Bill 25 helps Honolulu make the transition to zero-emission vehicles by requiring that a certain percentage of new parking stalls be "EV-ready" (with wiring and capacity for EV chargers to be installed). This will help to make electric vehicles more accessible to residents and reduce the overall cost of our transition to clean transportation.

This provision should be strengthened significantly, however. I respectfully request that the Committee adopt the Level 2 charging infrastructure requirements in the proposed CD2, but

retain the requirement for 25% (or more) EV ready across commercial and multi-family construction. I am concerned that the proposed 'points system' will fall far short in providing the infrastructure needed to ensure a low-cost transition to clean mobility in the near future—or worse, it will lead to gaming by the developers. Please follow the lead of dozens of other cities and simply set a percentage requirement for EV readiness.

Thank you for considering my testimony.

Casey Pelkey  
Kaneohe, HI 96744

Testimony  
Attachment  
Accept Terms and 1  
Agreement

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 6:31 AM  
**Subject:** Council/Public Hearing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name	Chuck Burrows
Phone	807595392
Email	Chuckkb@gmail.com
Meeting Date	02-29-2020
Council/PH Committee	Council
Agenda Item	Bill 25
Your position on the matter	Support
Representing	Self
Organization	
Do you wish to speak at the hearing?	No
Written Testimony	
Testimony Attachment	
Accept Terms and Agreement	1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 10:54 AM  
**Subject:** Council/Public Hearing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Lisa  
Phone 8083814412  
Email lisa4realestate@gmail.com  
Meeting Date 02-25-2020  
Council/PH Committee Council  
Agenda Item Bill 25  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

Honolulu City Council  
Zoning, Planning and Housing Committee  
Support for Bill 25, "Relating to the Adoption of the State Energy Conservation Code"  
February 27, 2020, 9:00 AM hearing

Aloha Chair Menor, Vice Chair Waters, and members of the Committee,

I am testifying in strong support of Bill 25, "Relating to the Adoption of the State Energy Conservation Code."

### Written Testimony

This is a critical clean energy and climate measure that would modernize the City & County of Honolulu's (Honolulu's) building energy code. This modernization updates Honolulu's existing building energy code—which is nearly fourteen years out of date—to increase occupant health and comfort while significantly reducing energy use for new homes and buildings. The proposed code revision reflects broad changes in technology, building materials, and best practices, while considering Honolulu's unique island and building environment.

In addition, this measure should ensure that new homes come equipped with either solar or high-efficiency water heaters, helping to close the loophole that has allowed thousands of fossil gas water

heaters to be installed in recent housing.

Finally, Bill 25 helps Honolulu make the transition to zero-emission vehicles by requiring that a certain percentage of new parking stalls be "EV-ready" (with wiring and capacity for EV chargers to be installed). This will help to make electric vehicles more accessible to residents and reduce the overall cost of our transition to clean transportation.

This provision should be strengthened significantly, however. I respectfully request that the Committee adopt the Level 2 charging infrastructure requirements in the proposed CD2, but retain the requirement for 25% (or more) EV ready across commercial and multi-family construction. I am concerned that the proposed 'points system' will fall far short in providing the infrastructure needed to ensure a low-cost transition to clean mobility in the near future—or worse, it will lead to gaming by the developers. Please follow the lead of dozens of other cities and simply set a percentage requirement for EV readiness.

Thank you for considering my testimony.

Lisa van den Heuvel  
Hawaii Kai

Testimony  
Attachment  
Accept Terms  
and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 3:43 PM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name	Sandra Fujita
Phone	8082358376
Email	yappygrl1@aol.com
Meeting Date	02-27-2020
Council/PH Committee	Zoning
Agenda Item	Bill 25
Your position on the matter	Support
Representing	Self
Organization	
Do you wish to speak at the hearing?	No
Written Testimony	I am in support of Bill 25. It is in Hawaii's best interest to reform outdated building and energy codes to be more efficient.
Testimony Attachment	
Accept Terms and Agreement	1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 3:51 PM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name GLENN DELCARMEN MD  
Phone 8083487688  
Email hi.familydoc@gmail.com  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item Bill 25  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

Written  
Testimony

I am in support of City Council Bill 25 to revise the building electrical code to ensure EV ready charger infrastructure in new residential and commercial developments. In order for our community to attain petroleum derived energy independence in the next 10-20 years, it's essential to convert to less petroleum fuel consuming forms of transportation. State and Federal tax incentives allowed for the affordable purchase of electrical vehicles. I call on our local government to support the ability of EV owners to conveniently and effectively charge their EVs at their multiresidence dwellings, workplace, public shopping facilities, recreational parks and beaches. I'm concerned that without this infrastructure support, our community will not be able to effectively relinquish their dependence on fossile fuel vehicles. I have already picked up and started carrying the ecological torch for renewable energy independence by personally converting my two household gasoline vehicles entirely to plug-in battery powered models. However, I recognize that a lack of available charging stations in our urban communities has dissuaded many individuals from making the same conversion. In this regard, I truly believe our local government can positively support it's constituencies desire to become thoughtful guardians of Papahānaumoku, Mother Earth by suporting the passage of Bill 25.

Respectively submitted for your favorable vote,

Glenn DelCarmen MD  
Hawaii kai

Testimony  
Attachment

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 8:30 PM  
**Subject:** Council/Public Hearing Speaker Registration/Testimony

## Speaker Registration/Testimony

**Name** Karen M Kimbrell  
**Phone** 8082634221  
**Email** karen.kimbrell@gmail.com  
**Meeting Date** 02-27-2020  
**Council/PH Committee** Council  
**Agenda Item** Agenda Item 11, Bill 25  
**Your position on the matter** Support  
**Representing Organization** Self  
**Do you wish to speak at the hearing?** Yes

**Written Testimony** The climate crisis is extremely urgent. This bill is important to move Hawaii closer to energy self-sufficiency. Hawaii's building industry lobby should not influence your decisions more than the majority of Oahu's citizens. Please do the right thing for our children and grandchildren.

**Testimony Attachment**

**Accept Terms and Agreement** 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 7:08 PM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Micah Hicks  
Phone 8082008983  
Email micahmh@live.com  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item Bill 25  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

Written  
Testimony

Bill 25 is an important part of future proofing Hawai'i's housing. We know we will need to move to more environmentally friendly forms of water heating and transportation. At some point it can be expected that most homes build now will have to retrofit their homes to accommodate for the phasing out of CO2 producing water heaters and cars. This will undoubtedly cost more for them, than it would cost to build this in a new home. So while it is entirely true that this bill will marginally drive up construction costs, it is also undeniably true that it saves money in the long run. I'm a millennial, practically debt free, have a well paying job by nearly any standard and am still a decade or more away from being able to afford a downpayment on a market value home on O'ahu where I can count the bones of my 'iwi. Housing costs are of immense concern to me. But allegations that this bill will substantially affect the affordability of a home are patently false. What has driven up home prices is feckless speculators, a building industry that caters to the faux luxury, and 125 years of land consolidation. As far as affordability goes, the opposition to Bill 25 is pinching pennies and loosing dollars.

Testimony  
Attachment  
Accept Terms and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 4:26 PM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Robert Woliver  
Phone 808-239-5577  
Email [rwoliver1@me.com](mailto:rwoliver1@me.com)  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item Support for Bill 25, "Relating to the Adoption of the State Energy Conservation Code"  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

Honolulu City Council  
Zoning, Planning and Housing Committee  
Support for Bill 25, "Relating to the Adoption of the State Energy Conservation Code"  
February 27, 2020, 9:00 AM hearing

Aloha Chair Menor, Vice Chair Waters, and members of the Committee,

I am testifying in strong support of Bill 25, "Relating to the Adoption of the State Energy Conservation Code."

Written Testimony This is a critical clean energy and climate measure that would modernize the City & County of Honolulu's (Honolulu's) building energy code. This modernization updates Honolulu's existing building energy code—which is nearly fourteen years out of date—to increase occupant health and comfort while significantly reducing energy use for new homes and buildings. The proposed code revision reflects broad changes in technology, building materials, and best practices, while considering Honolulu's unique island and building environment.

In addition, this measure should ensure that new homes come equipped with either solar or high-efficiency water heaters, helping to close the loophole that has allowed thousands of fossil gas water heaters to be installed in recent housing.

Finally, Bill 25 helps Honolulu make the transition to zero-emission vehicles by requiring that a certain percentage of new parking stalls be "EV-ready" (with wiring and capacity for

EV chargers to be installed). This will help to make electric vehicles more accessible to residents and reduce the overall cost of our transition to clean transportation.

This provision should be strengthened significantly, however. I respectfully request that the Committee adopt the Level 2 charging infrastructure requirements in the proposed CD2, but retain the requirement for 25% (or more) EV ready across commercial and multi-family construction. I am concerned that the proposed 'points system' will fall far short in providing the infrastructure needed to ensure a low-cost transition to clean mobility in the near future—or worse, it will lead to gaming by the developers. Please follow the lead of dozens of other cities and simply set a percentage requirement for EV readiness.

Thank you for considering my testimony.

Robert Woliver  
47-373 Mawaena St.  
Kaneohe, HI 96744  
808-239-5577

Testimony  
Attachment

Accept Terms and 1  
Agreement

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 4:54 PM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name	Debra Allen
Phone	928-846-7208
Email	debra@alleninv.com
Meeting Date	02-27-2020
Council/PH Committee	Zoning
Agenda Item	HB 25
Your position on the matter	Support
Representing Organization	Self
Do you wish to speak at the hearing?	No
Written Testimony	as a EV owner, I support the idea of changing the electrical code to ensure EV ready infrastructure is part of new construction. Why not?
Testimony Attachment	
Accept Terms and Agreement	1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 5:18 PM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name	Yvonne Geesey
Phone	8082279361
Email	geesey@hawaii.edu
Meeting Date	02-27-2020
Council/PH Committee	Zoning
Agenda Item	Bill 25
Your position on the matter	Support
Representing	Self
Organization	
Do you wish to speak at the hearing?	No
Written Testimony	
Testimony Attachment	
Accept Terms and Agreement	1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 5:54 PM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Kevin Kern  
Phone 808 276 7776  
Email k96732@gmail.com  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item Bill 25  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

### Written Testimony

Auto electrification represents our best chance at reducing our carbon footprint, especially as our grid continues to get cleaner through renewable energies and more roof top solar. But infrastructure to support EV charging is key to making this possible. We have a large number of compact housing structures where this is absolutely necessary to provide charging stations for EVs.

EV adoption is on an exponential curve and will grow far faster than our EV stations can possibly grow, so we will almost always be behind the curve. Thus, the importance of Bill 25 to support this infrastructure in our housing locations.

### Testimony Attachment

Accept Terms and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 7:35 PM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Dale Jensen  
Phone 8083471850  
Email dalejensen2@gmail.com  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item 11  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

### Written Testimony

For any concerned and responsible resident of the City and County of Honolulu, it is very difficult to understand how the council cannot see the logic for passage behind Bill 25. Climate change is real and is already happening. Hawaii and Honolulu will not be spared. We and everyone else worldwide needs to start making radical changes in our lifestyles to get off fossil fuels. Making solar hot water heaters and electrical connections for convenient charging of EV's are minimal measures - much more radical steps are coming. The Council needs to pass this measure and move on. We have listened to fossil fuel industries long enough; that is how we arrived at the current situation. Do what is right our children, grandchildren and the aina.

Testimony Attachment  
Accept Terms and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 7:35 PM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Dale Jensen  
Phone 8083471850  
Email dalejensen2@gmail.com  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item 11  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

### Written Testimony

For any concerned and responsible resident of the City and County of Honolulu, it is very difficult to understand how the council cannot see the logic for passage behind Bill 25. Climate change is real and is already happening. Hawaii and Honolulu will not be spared. We and everyone else worldwide needs to start making radical changes in our lifestyles to get off fossil fuels. Making solar hot water heaters and electrical connections for convenient charging of EV's are minimal measures - much more radical steps are coming. The Council needs to pass this measure and move on. We have listened to fossil fuel industries long enough; that is how we arrived at the current situation. Do what is right our children, grandchildren and the aina.

### Testimony Attachment

Accept Terms and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 9:33 PM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Daniela Escontrela  
Phone 9548734646  
Email descon@hawaii.edu  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item Bill 25  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

Written Testimony I support bill 25. Climate change is the existential crisis of our lifetime and we need to step up and take swift action to drastically reduce out greenhouse gases. This is even more imperative for Hawai'i. Being islands we are more at risk of the adverse effects of climate change

Testimony  
Attachment

Accept Terms and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 5:31 PM  
**Subject:** Public Infrastructure, Technology and Sustainability Speaker Registration/testimony

## Speaker Registration/Testimony

Name	Amy
Phone	8089274594
Email	Amyjw0709@gmail.com
Meeting Date	02-25-2020
Council/PH Committee	PITS
Agenda Item	Bill 25
Your position on the matter	Support
Representing	Self
Organization	
Do you wish to speak at the hearing?	No
Written Testimony	
Testimony Attachment	
Accept Terms and Agreement	1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 4:45 PM  
**Subject:** Public Infrastructure, Technology and Sustainability Speaker Registration/testimony

## Speaker Registration/Testimony

Name Sean Ganeku  
Phone 8086208357  
Email sean.ganeku@charter.com  
Meeting Date 02-27-2020  
Council/PH Committee PITS  
Agenda Item Bill 25  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

Sample testimony:

Honolulu City Council  
Zoning, Planning and Housing Committee  
Support for Bill 25, "Relating to the Adoption of the State Energy Conservation Code"  
February 27, 2020, 9:00 AM hearing

Aloha Chair Menor, Vice Chair Waters, and members of the Committee,

I am testifying in strong support of Bill 25, "Relating to the Adoption of the State Energy Conservation Code."

Written  
Testimony

This is a critical clean energy and climate measure that would modernize the City & County of Honolulu's (Honolulu's) building energy code. This modernization updates Honolulu's existing building energy code—which is nearly fourteen years out of date—to increase occupant health and comfort while significantly reducing energy use for new homes and buildings. The proposed code revision reflects broad changes in technology, building materials, and best practices, while considering Honolulu's unique island and building environment.

In addition, this measure should ensure that new homes come equipped with either solar or high-efficiency water heaters, helping to close the loophole that has allowed thousands of fossil gas water heaters to be installed in recent housing.

Finally, Bill 25 helps Honolulu make the transition to zero-emission vehicles by requiring that a certain percentage of new parking stalls be “EV-ready” (with wiring and capacity for EV chargers to be installed). This will help to make electric vehicles more accessible to residents and reduce the overall cost of our transition to clean transportation.

This provision should be strengthened significantly, however. I respectfully request that the Committee adopt the Level 2 charging infrastructure requirements in the proposed CD2, but retain the requirement for 25% (or more) EV ready across commercial and multi-family construction. I am concerned that the proposed 'points system' will fall far short in providing the infrastructure needed to ensure a low-cost transition to clean mobility in the near future—or worse, it will lead to gaming by the developers. Please follow the lead of dozens of other cities and simply set a percentage requirement for EV readiness.

Thank you for considering my testimony.

Sean Ganeku  
Kaneohe, Hi. 96744

Testimony  
Attachment  
Accept Terms and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Wednesday, February 26, 2020 6:59 AM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name John Witeck  
Phone 595-7362  
Email Jwiteck@yahoo.com  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item Bill 25  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

Written Testimony  
It's crucial to enact Bill 25 into law. It will provide more cost-effective and energy-efficient housing for residents and aid us in lessening the impacts on the environment in this age of climate change. It would be irresponsible to fail to make these sensible requirements for future housing units built on Oahu. I urge you to approve Bill 25 and help protect our future quality of life. We owe that to our children and grandchildren.

Testimony Attachment

Accept Terms and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Wednesday, February 26, 2020 8:17 AM  
**Subject:** Council/Public Hearing Speaker Registration/Testimony  
**Attachments:** 20200226081654\_Bill\_25\_Hawaii\_EVA.pdf

## Speaker Registration/Testimony

Name Lorn Hoku Douglas  
Phone 8083331974  
Email lornd@yahoo.com  
Meeting Date 02-27-2020  
Council/PH Committee Council  
Agenda Item Bill 25  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

Written Testimony Aloha,  
My wife and I have accumulated over 100,000 carbon free miles charging our cars with our solar system. We concur with the Big Island Electric Vehicle Association's position as outlined in the attached note.  
Your careful consideration of the suggestions in this position is greatly appreciated.  
Lorn & Margaret Hoku Douglas

Testimony Attachment 20200226081654\_Bill\_25\_Hawaii\_EVA.pdf  
Accept Terms and Agreement 1

IP: 192.168.200.67

# Speaker Registration/Testimony

Name Paula A. Miller  
 Phone 808-963-5082  
 Email PAVMiller721@gmail.com  
 Meeting Date 02-27-2020  
 Council/PH Committee Zoning  
 Agenda Item Bill 25  
 Your position on the matter Support  
 Representing Self  
 Organization N/A  
 Do you wish to speak at the hearing? No

I am testifying in strong support of Bill 25, "Relating to the Adoption of the State Energy Conservation Code."

This is a critical clean energy and climate measure that would modernize the City and County of Honolulu's building energy code. In addition, this measure should ensure that new homes come equipped with either solar or high-efficiency water heaters, helping to close the loophole that has allowed thousands of fossil gas water heaters to be installed in recent housing.

Written Testimony Finally, Bill 25 will help to make electric vehicles more accessible to residents and reduce the overall cost of our transition to clean transportation.

I further request that the EV-ready provision of Bill 25 be amended to require that 100% of new parking stalls be EV-ready. The proposed "points system" will be inadequate in providing the needed infrastructure to pave the way for a low-cost transition to clean mobility. Please follow the lead of dozens of other cities and simply set a percentage requirement for EV readiness.

Thank you for considering my testimony.

Paula A. Miller  
 Ninole, HI 96773

Testimony Attachment

Accept Terms and Agreement 1

IP: 192.168.200.67

# Speaker Registration/Testimony

Name Gary L Miller  
 Phone 8089635082  
 Email millerninole@gmail.com  
 Meeting Date 02-27-2020  
 Council/PH  
 Committee Zoning  
 Agenda Item Bill 25  
 Your position on  
 the matter Support  
 Representing  
 Organization Self  
 Do you wish to  
 speak at the  
 hearing? No

Written Testimony As an Electric Vehicle (EV) owner, I believe that it is important to improve electric vehicle charging infrastructure in order to facilitate the adoption of clean EVs in Hawaii. This bill is an excellent step in that process.

Thank you for your consideration on this important bill.  
 Gary Miller

Testimony  
 Attachment  
 Accept Terms and  
 Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Wednesday, February 26, 2020 9:09 AM  
**Subject:** Public Infrastructure, Technology and Sustainability Speaker Registration/testimony

## Speaker Registration/Testimony

Name                   Kecia Joy  
Phone                 808419-5143  
Email                 keciamau@yahoo.com  
Meeting Date        02-28-2020  
Council/PH  
Committee           PITS  
Agenda Item         11  
Your position on  
the matter           Support  
Representing        Self  
Organization  
Do you wish to  
speak at the  
hearing?            No

Written  
Testimony

We are at a critical tipping point people- Every decision you make HAS to be for the environment or there WON'T be a way of life that we are used to ANYMORE. Climate change is real and is a serious problem. Some times we don't want to face our problems but this time, we will be forced to. Many are willing to individually and collectively do something about it and make major changes. Why is our government so hesitant? Our government is YOU. So I ask. you why? IS it the money you stand to lose? Greed? Pressure from outside corporations who stand to lose \$? This kind of way of being is not going to fly much longer. Please, for the love of G-D, support Agenda item 11!

Testimony  
Attachment

Accept Terms and  
Agreement         1

IP: 192.168.200.67

# Speaker Registration/Testimony

Name Alex Naumov  
 Phone 8084949300  
 Email Alexcommon@gmail.com  
 Meeting Date 02-27-2020  
 Council/PH  
 Committee Zoning  
 Agenda Item 11  
 Your position on  
 the matter Support  
 Representing Self  
 Organization  
 Do you wish to  
 speak at the  
 hearing? No

Written  
 Testimony Just last week there were many headlines locally stating that 2019 was the hottest year in Honolulu's history. This Bill 25 is a foundational bill to start Honolulu on a path to first doing no more climate harm, by using practical, proven and cost-effective building techniques that will lower long-term cost of living for residents. Why has this taken almost a year to decide if this is right for Honolulu?

Please pass Bill 25, for the community, those seeking affordable homes, the climate and our keiki.

Testimony  
 Attachment  
 Accept Terms  
 and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 11:24 AM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name David Atcheson  
Phone (808) 226-5209  
Email atchesond@gmail.com  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item 11. Bill 25 (2019), CD2 Elefante  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

Written  
Testimony

I believe it's clear that the public supports strong measures to address the climate crisis and to prepare ourselves for the necessary transformations in our energy systems. You have heard overwhelming support for a strong bill 25. Though I feel Bill 25 CD2 does not go far enough, I do support it and urge you to advance it without further delay. It's significant to me that the Office of Climate Change, Sustainability, and Resiliency is in strong support. I respect this office and its mission and am proud to live in a city whose residents overwhelmingly approved its establishment. Changing how we do things is difficult and challenging times are ahead. We need continued signs that our elected officials will not shrink from taking the necessary steps to maintain a livable (and I hope thriving) island, state, and world. Passing a strong bill 25 (Elefante CD2 version) will be an encouraging signpost that we are on the path to doing what's needed. Mahalo for considering my comments here as well as my previous testimony on this important bill.

Testimony  
Attachment

Accept Terms and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 11:25 AM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name John Naylor  
Phone 8088881111  
Email jdancer@kula.us  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item CD2 Agenda 11 by Councilmember Elefante  
Your position on the matter Support  
Representing Self  
Organization self  
Do you wish to speak at the hearing? No

Aloha,

As an island state we must do everything possible to reduce our impact on climate change. Solar works and is upgrading constantly. and 20 yr old solar hot h2o heaters are still heating water esp in our sunny climate. Solar pays for itself quickly which helps our residents stay in their homes and in our state. It's a NO Brainer!!!

Written Testimony Please don't cave into the fossils in the fossil fuel industry. In fact do some research into the sometimes terrible results of fracking in communities on the mainland...

Also please note that the big banks are beginning to wake up and committing to stop funding the worst of the FF industry...

Solar Now for all construction projects including retrofits!!!

JN

Testimony

Attachment

Accept Terms and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 11:22 AM  
**Subject:** Public Infrastructure, Technology and Sustainability Speaker Registration/testimony

## Speaker Registration/Testimony

Name                   Tadia Rice  
Phone                 8082862313  
Email                 tadiarice@yahoo.com  
Meeting Date        01-27-2020  
Council/PH  
Committee           PITS  
Agenda Item         CD2  
Your position on  
the matter           Support  
Representing         Self  
Organization  
Do you wish to  
speak at the  
hearing?             No

Written  
Testimony

As a concerned citizen who clearly understands that humanity is suffering a climate crisis, please pass Bill 25 and begin the legislation process. Oahu needs to update building codes for homes and condos so that all residents and businesses will be more energy efficient; that hybrid and electric vehicle can be charged in appropriate areas; and encourage all buildings to install solar hot water or a photovoltaic systems on their roofs.

Mahalo!

Testimony  
Attachment

Accept Terms and  
Agreement        1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 10:56 AM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name STEPHEN TSCHUDI  
Phone 8083493213  
Email byjove@hotmail.com  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item #11, CD2 introduced by Councilmember Elefante  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No  
Written Testimony Let's step up and do our part! This is an INVESTMENT in humanity's future. Don't place a small bottom line above doing the right thing for our home, Earth.  
Testimony Attachment  
Accept Terms and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 8:00 AM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Mark Branner  
Phone 8087971811  
Email mybranner@gmail.com  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item Bill 25 (CD2 introduced by Councilmember Elefante)  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No  
Written Testimony Please work to pass any and all measures that seek to address the growing climate crisis. This bill is a tiny step forward. We need many more measures and I strongly support making our City and State as clean and energy efficient as possible.  
Testimony Attachment  
Accept Terms and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 6:31 AM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name james edwards  
Phone 8089367159  
Email hawaiihort@yahoo.com  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item bill 25 cd2  
Your position on the matter Oppose  
Representing Self  
Organization  
Do you wish to speak at the hearing? No  
Written Testimony I feel that people should have the free choice to build, a safe, dwelling as they see fit. Solar electric and water should have incentives sufficient to convince, not force, people to utilizing these great options.  
Testimony Attachment  
Accept Terms and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 6:51 AM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Randy Ching  
Phone 808-942-0145  
Email makikirandy@yahoo.com  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item Bill 25 CD2 (Elefante)  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

Aloha Chair Menor and members of the committee,

I support Bill 25 CD2 (Elefante). We are in a climate emergency. It will take at least a decade for us to completely transform the way we live to adapt to the changing climate.

Written Testimony Stopping the use of fossil fuels (like natural gas) and transitioning to electric vehicles means we have to start NOW. Bill 25 is a good start but we have to do so much more.

Please pass Bill 25 CD2 (Elefante), even as watered down as it is. Better than nothing.

Randy Ching

Testimony Attachment

Accept Terms and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Saturday, February 22, 2020 3:25 PM  
**To:** Otto, Pearlene  
**Cc:** mioono@hotmail.com; Murayama, Gail Y  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name	Mio chee
Phone	8082222940
Email	mioono@hotmail.com
Meeting Date	02-27-2020
Council/PH Committee	Zoning
Agenda Item	Bill 25 CD2 Elefante
Your position on the matter	Support
Representing	Self
Organization	
Do you wish to speak at the hearing?	No
Written Testimony	I am support of Bill 25 CD2 Elefante.
Testimony Attachment	
Accept Terms and Agreement	1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Saturday, February 22, 2020 2:16 PM  
**To:** Otto, Pearlene  
**Cc:** colbytakeda@gmail.com; Murayama, Gail Y  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name	Colby Takeda
Phone	8084976647
Email	colbytakeda@gmail.com
Meeting Date	02-27-2020
Council/PH Committee	Zoning
Agenda Item	Bill 25 CD2 Elefante
Your position on the matter	Support
Representing	Self
Organization	
Do you wish to speak at the hearing?	No
Written Testimony	This is an important step toward a healthier, more sustainable city! Thank you for supporting this bill.
Testimony Attachment	
Accept Terms and Agreement	1

IP: 192.168.200.67

# Speaker Registration/Testimony

Name	Gwen Cruise
Phone	8087325156
Email	gwendellyn@gmail.com
Meeting Date	01-23-2020
Council/PH Committee	Zoning
Agenda Item	Bill 25 CD2 (Elefante)
Your position on the matter	Support
Representing Organization	Self
Do you wish to speak at the hearing?	No
Written Testimony	I am a homeowner and landlord and I fully support this bill. This bill makes good financial sense and it is also an important "first steps" in addressing climate change.
Testimony Attachment	
Accept Terms and Agreement	1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 12:40 PM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Stacey Gray  
Phone 8085949891  
Email staceyfgray@gmail.com  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item Bill 25 CD2  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

Aloha Councilmembers,

Written  
Testimony

My name is Stacey Gray and I live in Manoa valley. I am writing in support of Bill 25 (2019)CD2, introduced by Councilmember Elefante. Honolulu needs to create more policies that reflect the threats from climate change. This bill will address the outdated energy and building codes to be climate resilient while also providing affordable energy efficient options accessible to all of O'ahu's residents. I lived in a high rise for years on Ward ave. and I wanted to buy an electric vehicle and support solar electricity however that was impossible at that time. This new bill would make it possible for new construction to charge EVs thereby taking some of the peak energy off the grid if charged during the day. This is a win win for the citizens, the utility, and the environment.

The passage of this bill demonstrates that solution-oriented climate resilient policy can be cost-effective and prioritizes the health and well being of the environment.

Mahalo for your consideration of my testimony in support for Bill 25(2019)CD2.

Sincerely,  
Stacey

Testimony  
Attachment

Accept Terms and Agreement 1

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 1:48 PM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Lisa Grandinetti  
Phone 8082234292  
Email lisanakagrand@gmail.com  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item Bill 25(CD2)  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

Written  
Testimony

My name is Lisa and I live in Mo'ili'ili. I am writing in support of Bill 25(2019) CD2, introduced by Councilmember Elefante. I believe Honolulu needs to create policies that reflect the times we are living in. This bill will address our outdated energy and building codes to be climate resilient while also providing affordable energy efficient options accessible to all of O'ahu's residents. Research shows that making new structures more energy efficient with solar water heaters and PV and EV capabilities built-in (instead of retrofitting structures) will save homes and businesses money over time. The passage of this bill, demonstrates that solution-oriented climate resilient policy can be cost-effective and prioritizes the health and wellbeing of residents and the environment.

Mahalo for the opportunity to voice support of Bill 25(2019) CD2.

Sincerely,  
Lisa Grandinetti

Testimony  
Attachment

Accept Terms and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 3:58 PM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name	Daniel Bishop
Phone	808 239 6014
Email	dannyspunaluufarm@gmail.com
Meeting Date	02-27-2020
Council/PH Committee	Zoning
Agenda Item	Bill 25(CD2)
Your position on the matter	Support
Representing	Self
Organization	
Do you wish to speak at the hearing?	No
Written Testimony	In Strong Support
Testimony Attachment	
Accept Terms and Agreement	1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 6:05 PM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Angela Huntemer  
Phone 8082243101  
Email ahuntemer@aol.com  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item Bill 25 (CD2)  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

### Written Testimony

I am a public school teacher and I live in Kahuku. Please vote YES on Bill 25(2019) CD2. Honolulu needs policies and regulations that reflect the 21st century. Our outdated energy and building codes need to be updated to be climate resilient and also providing affordable energy efficient options accessible to all of O'ahu's residents. New structures need to be more energy efficient with solar water heaters and PV and EV capabilities built-in (instead of retrofitting structures). This will save homes and businesses money over time. This bill, demonstrates that solution-oriented climate resilient policy is cost-effective. The longterm health and wellbeing of residents and the environment is a no brainer. Mahalo for the opportunity to voice support of Bill 25(2019) CD2.  
Angela Huntemer MEd

### Testimony Attachment

Accept Terms and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 7:13 PM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Abigail Moore  
Phone (937) 239-1286  
Email moorea38@udayton.edu  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item Bill 25 (CD2)  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

Aloha Chair Menor and members of the committee,

Written  
Testimony

My name is Abigail Moore and I live in Honolulu. I am writing in support of Bill 25(2019) CD2, introduced by Councilmember Elefante. I believe Honolulu needs to create policies that reflect the changing times we are living in and the world we wish to become. This bill will address our outdated energy and building codes to be climate resilient while also providing affordable energy efficient options accessible to all of O'ahu's residents. Research shows that making new structures more energy efficient with solar water heaters and PV and EV capabilities built-in (instead of retrofitting structures) will save homes and businesses money over time. Hawaii is already at huge threat of global warming with sea level rise, loss of biodiversity, and displaced people. The passage of this bill demonstrates that solution-oriented climate resilient policy can be cost-effective and prioritizes the health and wellbeing of residents and the environment. The bill will show yet again that Hawaii is committed to the continued betterment of environmental policy and cares deeply about its citizens.

Mahalo for the opportunity to voice support of Bill 25(2019) CD2.

Sincerely,  
Abigail Moore

Testimony  
Attachment  
Accept Terms and Agreement 1

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 6:47 PM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Virginia Tincher  
Phone 6509969648  
Email Vatincher@gmail.com  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item Bill 25 (CD2)  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

Written  
Testimony

My name is Virginia Tincher and I live in Honolulu. I am writing in support of Bill 25(2019) CD2, introduced by Councilmember Elefante. I believe Honolulu needs to create policies that reflect the times we are living in. This bill will address our outdated energy and building codes to be climate resilient while also providing affordable energy efficient options accessible to all of O'ahu's residents. Research shows that making new structures more energy efficient with solar water heaters and PV and EV capabilities built-in (instead of retrofitting structures) will save homes and businesses money over time. The passage of this bill, demonstrates that solution-oriented climate resilient policy can be cost-effective and prioritizes the health and wellbeing of residents and the environment.

Mahalo for the opportunity to voice support of Bill 25(2019) CD2.

Sincerely,  
Virginia Tincher

Testimony  
Attachment

Accept Terms and Agreement 1

IP: 192.168.200.67

# Speaker Registration/Testimony

Name Paul Bernstein  
 Phone 8083737161  
 Email paulbernstein2004@yahoo.com  
 Meeting Date 02-27-2020  
 Council/PH Committee Zoning  
 Agenda Item Bill 25 (2019)  
 Your position on the matter Support  
 Representing Self  
 Organization  
 Do you wish to speak at the hearing? No

February 26, 2020

Aloha Chair Menor and members of the Committee,

I am testifying in strong support of Bill 25, specifically the Administration's CD2 version which was submitted by Councilmember Elefante. This bill helps to correct market failures related to energy costs by lowering the overall cost of providing energy for heating water and powering vehicles.

Economists have long recognized the principal-agent problem that constrains incentives for energy-efficiency investments by either landlords or tenants in renter-occupied properties and the need for energy efficiency standards to overcome this market failure. That is, there are instances that regulators should invoke energy efficiency standards to effect a more efficient market outcome that improves the well being of society.

Written  
Testimony

Bill 25 is one such case. The Bill's requirement for the installation of solar hot water (SHW) heaters would result in savings of up to \$8,600 per household over the expected life of the equipment compared to a standard grid resistance water heater.

As Joseph Boivin, the former executive VP of the Gas Company, testified: "[Solar water heating] may be a little more expensive upfront as compared to installing a gas water heater, but after a few years the hot water is free. Despite the claims, the economics do not in any way favor the ongoing use of gas energy over the sun."

Thus a building with solar water heating will be less expensive in the long run, meaning lower total costs to homeowners and renters. In addition, much of the money spent for gas water heating flows out of the state to the providers of fuel (whether crude oil or LNG if were to ever be imported) and to the executives of the parent

company of the Gas Company. This flow of funds contrasts to the paying local workers to install solar hot water systems.

Regarding EV charging infrastructure, Council Member Elefante's CD2 strikes a fair balance between adding costs to new buildings and the need for Honolulu to reduce its greenhouse gas emissions. The Council Member and the Office of Climate Change, Sustainability and Resiliency (CCSR) are to be commended for going to great lengths to engage a wide array of stakeholders with differing views so as to arrive at this good compromise.

Mahalo for the opportunity to submit testimony in support Bill 25 (2019). In order for the City to cost-effectively meet its emission reductions goals, I urge you to support Council Member Elefante's version CD2 of the Bill.

Kind regards,  
Paul Bernstein, PhD

Testimony  
Attachment  
Accept Terms and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 8:22 PM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Robert Justice  
Phone 8088403372  
Email justicer@outlook.com  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item Bill 25(CD2)  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

Aloha Chair Menor and members of the committee,

Written  
Testimony

My name is Robert Justice and I live in Kapolei. I am writing in support of Bill 25(2019) CD2, introduced by Councilmember Elefante. I share in the belief that Honolulu needs to create policies that will prepare us for the adverse effects of global warming and climate change. This bill will revise our outdated energy and building codes to enable more climate resilience while also providing affordable energy efficient options for O'ahu's residents. Research shows that making new structures more energy efficient with solar water heaters and PV and EV capabilities built-in (instead of retrofitting structures) will save homeowners and businesses money over time. Based on my personal experience with the installation of an EV charger and PV system, I can tell you that built-in capabilities would have been less expensive in the long run.

The passage of this bill will demonstrate that a solution-oriented climate resilience policy can be cost-effective and prioritizes the health and well-being of residents and the environment.

Mahalo for the opportunity to voice support of Bill 25(2019) CD2.

Sincerely,  
Robert Justice

Testimony  
Attachment

## In Support of Bill 25 CD2 (2019)

February 24, 2020

Dear Committee Chair Menor, Vice Chair Waters and ZPH Committee Members,

The urgency of passing Bill 25 CD2 this year cannot be overstated:

The problem: Climate scientists continue to warn us that intensive actions to reduce greenhouse gases in our atmosphere are needed NOW if we are to hold the global temperature rise below 3 degrees Centigrade—literally a point of no return from Earth as we know it. (See [Climate Change—The Facts in 4 Minutes](#) ; click the picture that appears.)

A partial solution: Bill 25 CD2 as written will make two substantive changes in the lives of Hawaii's citizens:

- 1) How we heat water: use of solar or other renewable energy source as opposed to gas
- 2) How we get around the island: use electric vehicles (EVs), not fossil fuel-driven vehicles

It is up to you, our leaders, to understand the crisis we are in, and make these new options available to as many of Hawaii's citizens as possible. Bill 25 CD2 is not a total solution but a critical first step. It will encourage people to take small, incremental steps in their own lives that can make a significant difference when adopted worldwide.

The benefits: Long-term economic benefits will accrue to Hawaii's citizens from the passage of Bill 25 CD2:

- 1) Water heating: After the initial cost for solar panels is paid off (3-5 yrs), the home owner will never again receive a gas or electric bill for heating water. [Regarding being able to choose a water heating method, most homeowners don't get a choice anyway--the home builders do.]
- 2) EV-ready infrastructure: When the infrastructure for an EV charger is installed in new constructions, the cost savings is considerable. For example, the infrastructure for a Level 2 charger could cost \$2500 or less at the time of construction (cf. \$10,000 if retrofitted). Additionally, having EV-ready parking stalls is already becoming a huge selling point for multi-dwelling units (condos and apartments).
- 3) Electric vehicle ownership/leasing: Purchase costs continue to drop; driving range continues to increase (over 150 miles per charge in most cars; many models average 250 miles per charge as of 2020); EVs require no gas, no oil, no transmission fluid, no water; maintenance costs are substantially lower than for fossil fuel cars (our own EV, a 2011 Nissan Leaf, has, in 8 years and 73,000 miles driven, so far needed: yearly battery and multipoint checks; brake flush and brake lube; a second set of tires and tire rotations; occasional windshield wiper replacements; replacement of one auxiliary battery (not under warranty) and one replacement main battery after four years (free under warranty). That's it!

These benefits do not include the environmental benefits (reduced global warming; less air, water and ground pollution; fewer health problems due to less pollution) as we replace gas-powered cars with EVs worldwide.

Retraining: Obviously, people employed in the fossil fuel industries (coal, oil, gas) will be negatively affected by the elimination of fossil fuels and will need retraining in clean energy jobs. Government as well as private companies will need to play large roles in this transition (there is a State bill, HB1934, in the legislature this session supporting such partnerships). This is not socialism, this is people helping people and people helping the planet. [Think of the U.S. government's role in WWII where women were quickly trained to make weapons of war.] All levels of government and businesses—including gas and fossil fuel companies in Hawaii--should play active roles in this transition. They, along with the State Legislature and City Council, must acknowledge that coal, oil and gas-based industries are harming the planet, that the shift to clean energy sources must be made, and that providing appropriate assistance to workers as needed is essential.

Think Big: Some amendments to Bill 25 are required due to our heightened climate emergency:

- Require that 100% (not 25%) of new multi-dwelling home and commercial parking stalls be made EV-ready. Vancouver, Canada, now requires 100% of stalls be EV-ready.
- Require Level 2 (not Level 1) chargers be installed (most municipalities adopting similar laws are now mandating Level 2 chargers due to their efficiency)
- State clearly in Hawaii's Energy Code that fossil fuel energy sources are no longer an option; if choices are to be made, only clean, renewable energy options are acceptable

We can all sense that Bill 25 is the right thing to do. Spend the money now for big payoffs in the future. Help Hawaii lead in the race to save our planet and our people. The next generation is counting on you. Thank you.

Jan Pappas – Aiea, Hawaii

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**From:** CLK Council Info  
**Sent:** Wednesday, February 26, 2020 1:58 AM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Tlaloc Tokuda  
Phone 8083250486  
Email tlalocctt@hotmail.com  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item 11  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

Written  
Testimony

I am one of the 6000 350HI members/volunteers and i support Bill 25 and CD2 introduced by Councilmember Elefante. Amory Lovins energy efficiency guru quantifies how efficiency can have far greater savings. In the paper, titled "How Big Is the Energy Efficiency Resource?", Lovins shows that the potential for energy efficiency has been massively understated and its cost overstated, by analyzing not whole buildings, vehicles, and factories, but only their individual parts, thus missing valuable ways to help the parts work together to save more energy at lower cost. Lovins shows a pathway to staying well below 2 degrees is more achievable than any current climate scenarios assume or suggest.

The paper cites strong empirical evidence that the scope for energy efficiency is actually severalfold larger and cheaper than had previously been thought. Unlike renewable energy, whose cost has plunged in the past decade, energy efficiency had been assumed to cost more as the cheapest methods are exhausted. This widespread assumption, based on economic theory not engineering practice, was overturned by an Editorial published today in the respected peer-reviewed journal Environmental Research Letters.

\* While opponents of the bill have argued it will make construction prohibitively expensive, the American Cities Climate Challenge estimates that developers will actually spend from \$750 to at most \$3,200 more to include energy efficiency. That's less than half a percent of a new home price — and with 50% monthly energy savings on bills, it doesn't take long for homeowners and renters to recoup all that and more [2].

Energy Efficiency is doable but Bill 25 aims at the lowest common denominator. This bill has many stakeholders but it seems the Council has bent over backwards to accommodate the

building industry and Hawaiian Gas. It's obvious that the concerns of constituents, environmentalists, and other citizens concerned about the Climate Crisis carry very little weight compared to those of industry groups and developers. As noted in an Op-Ed in last week's Star-Advertiser, over 90% of written testimony at the previous ZPH hearing was in favor of a strong Bill 25

But what we get is a watered down ineffective bill that will not help us get to 100% renewables.

However many people spent a lot of time so i support the bill and lets move onto doing something because as Amory Lovins has said "energy efficiency is actually severalfold larger and cheaper than had previously been thought."

[2]<https://www.staradvertiser.com/2020/02/17/editorial/island-voices/column-bill-25-provisions-would-be-affordable-for-builders-and-buyers/>

Mahalo,  
Tlaloc Tokuda  
Kailua Kona, HI 96740

Testimony  
Attachment

Accept Terms  
and Agreement 1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 1:18 PM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Laura Gray  
Phone 8082607940  
Email laurag@divefish.com  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item 5 or 7  
Your position on the matter Support  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

### Written Testimony

I support Councilman Elefante's bill 25 CD2. I think we need to stop greenwashing and actually get something passed. I wish this bill went a whole lot farther. If we do not make serious changes to business as usual, then we are all going down together. We are trying to fight for our children and grand children. We are not paid to sit in hearing after hearing. You all are, and need to start working for the people of Hawaii. Mahalo to the people who have been trying. We all know who has been doing the people's business and who caters to developer business. Sorry to be blunt, but time is running out.

### Testimony Attachment

Accept Terms and Agreement 1

IP: 192.168.200.67

### Testimony in Support of Bill 25

My name is Lory Ono and I live in Kaneohe. I am writing in support of Bill 25 (2019) CD2, introduced by Councilmember Elefante. I believe that Honolulu needs to create policies that reflect the times we are living in. This bill will address our outdated energy and building codes to be climate resilient while also providing affordable, energy efficient options accessible to all of O'ahu's residents. Research shows that making new structures more energy efficient with solar water heaters and PV and EV capabilities built-in (instead of retrofitting structures) will save homes and businesses money over time. The passage of this bill demonstrates that solution-oriented climate resilient policy can be cost effective and prioritizes the health and wellbeing of residents and the environment.

Thank you very much for your time and attention.

Mahalo,  
Lory Ono

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 6:20 PM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Caroline Kunitake  
Phone 8087822150  
Email caroline.m.kunitake@gmail.com  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item Bill 25 (gas water heaters and EV-readiness in new buildings)  
Your position on the matter Support  
Representing Self  
Organization <https://350hawaii.org/>  
Do you wish to speak at the hearing? No

Dear Chair Menor and Members of the ZPH Committee,

I am writing in support of Bill 25 CD2 (which was introduced by Council Member Elefante).

We ask for your testimony in support one last(?) time, for CD2 introduced by Council Member Elefante.

Written Testimony \* Honolulu is currently ranked the nation's fourth-worst city at encouraging energy-efficient buildings [2].

[2] <https://www.staradvertiser.com/2020/02/17/editorial/island-voices/column-bill-25-provisions-would-be-affordable-for-builders-and-buyers/>

Let's change this by passing laws that will support more renewable energy.

Mahalo,  
Caroline Kunitake

Testimony  
Attachment

Accept Terms and Agreement 1

# Speaker Registration/Testimony

Name Lana Brodziak  
 Phone 808-366-6898  
 Email lanajbb@aol.com  
 Meeting Date 02-27-2020  
 Council/PH Committee Zoning  
 Agenda Item Item 11, CD2  
 Your position on the matter Support  
 Representing Self  
 Organization  
 Do you wish to speak at the hearing? No

Please have the political will to move forward with this simple action.

The small investment costs up front will be easily returned over the long-term.

## Written Testimony

Your Duty is to support policies the majority of your constituents favor.

Please fulfill not only your role as a policy maker, but as a global citizen who understands the long term impacts of in-action on policies such as these.

## Testimony Attachment

Accept Terms and Agreement 1

IP: 192.168.200.67

# Speaker Registration/Testimony

Name	Barbara George
Phone	638-5690
Email	barbarageorge40@yahoo.com
Meeting Date	02-27-2020
Council/PH Committee	Zoning
Agenda Item	Bill 25 (CD2)
Your position on the matter	Support
Representing	Self
Organization	
Do you wish to speak at the hearing?	No
Written Testimony	STRONGLY SUPPORT!!!
Testimony Attachment	
Accept Terms and Agreement	1

IP: 192.168.200.67

# Speaker Registration/Testimony

Name Blair Suzuki  
 Phone 8084697545  
 Email blair.sm.suzuki@gmail.com  
 Meeting Date 02-27-2020  
 Council/PH Committee Zoning  
 Agenda Item Bill 25  
 Your position on the matter Comment  
 Representing Self  
 Organization  
 Do you wish to speak at the hearing? No

While I fully support the City & County of Honolulu's efforts for climate preparedness and sustainability improvements, I think that this bill puts an undue burden on development costs that would negatively impact Hawaii households at 140% AMI and under.

The infrastructure requirements required by this bill would increase the cost of development for any HHFDC projects or any private projects targeting affordable housing units. These added cost could be the tipping point that causes such projects to not pencil out, and therefore put us as a county further and further from addressing the shortage in affordable housing.

Written  
Testimony

I would request that an amendment be made to the bill that authorized an exemption for these requirements for any project where over 50% of the units are developed for 140% AMI and below.

Thank you for the opportunity to testify.

Mahalo,

Blair Suzuki

Testimony  
 Attachment  
 Accept Terms  
 and Agreement

1

IP: 192.168.200.67

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**From:** CLK Council Info  
**Sent:** Tuesday, February 25, 2020 11:04 PM  
**Subject:** Zoning, Planning and Housing Speaker Registration/Testimony

## Speaker Registration/Testimony

Name Jeffrey Laupola  
Phone 808-382-2039  
Email Jeffrey.W.Laupola@gmail.com  
Meeting Date 02-27-2020  
Council/PH Committee Zoning  
Agenda Item Bill 25 (2019)  
Your position on the matter Comment  
Representing Self  
Organization  
Do you wish to speak at the hearing? No

Aloha Honolulu Council Members,

The effects of climate change will be catastrophic for our island community and thus I support the upgrading of our electrical code to prepare for a clean energy economy. However, the electrical vehicle mandates at the expense of building affordable housing is not right. We do not have to choose one over the other.

Written  
Testimony

While we have a climate crisis, we also have a housing crisis that is forcing our middle-class family and friends to leave their home in Hawaii. The cost of housing is the largest burden on a family's budget and the electrical vehicle requirements in Bill 25 increase that burden. The cost of housing is high enough and any increase in costs due to electrical vehicle housing will exacerbate our housing crisis.

Please exercise balance, in minimizing housing costs to our middle class while making incremental and needed modifications in support of a clean energy Hawaii future.

Thank you for the opportunity to testify and thank you for being public stewards of our land and people.

Mahalo,  
Jeff

Testimony  
Attachment

# Speaker Registration/Testimony

Name Pua Pakele  
 Phone 808-429-6980  
 Email pualena@gmail.com  
 Meeting Date 02-27-2020  
 Council/PH  
 Committee Zoning  
 Agenda Item Bill 25  
 Your position  
 on the matter Support  
 Representing Self  
 Organization  
 Do you wish to  
 speak at the  
 hearing? No

Honolulu City Council  
 Zoning, Planning and Housing Committee  
 Support for Bill 25, "Relating to the Adoption of the State Energy Conservation Code"  
 February 27, 2020, 9:00 AM hearing

Aloha Chair Menor, Vice Chair Waters, and members of the Committee,

I am testifying in strong support of Bill 25, "Relating to the Adoption of the State Energy Conservation Code."

Written  
 Testimony

This is a critical clean energy and climate measure that would modernize the City & County of Honolulu's (Honolulu's) building energy code. This modernization updates Honolulu's existing building energy code—which is nearly fourteen years out of date—to increase occupant health and comfort while significantly reducing energy use for new homes and buildings. The proposed code revision reflects broad changes in technology, building materials, and best practices, while considering Honolulu's unique island and building environment.

In addition, this measure should ensure that new homes come equipped with either solar or high-efficiency water heaters, helping to close the loophole that has allowed thousands of fossil gas water heaters to be installed in recent housing.

Finally, Bill 25 helps Honolulu make the transition to zero-emission vehicles by requiring that a certain percentage of new parking stalls be "EV-ready" (with wiring and capacity for EV chargers to be installed). This will help to make electric vehicles more accessible to residents and reduce the overall cost of our transition to clean transportation.

This provision should be strengthened significantly, however. I respectfully request

that the Committee adopt the Level 2 charging infrastructure requirements in the proposed CD2, but retain the requirement for 25% (or more) EV ready across commercial and multi-family construction. I am concerned that the proposed 'points system' will fall far short in providing the infrastructure needed to ensure a low-cost transition to clean mobility in the near future—or worse, it will lead to gaming by the developers. Please follow the lead of dozens of other cities and simply set a percentage requirement for EV readiness.

Thank you for considering my testimony.

Pua Pakele, Honolulu, HI

Testimony  
Attachment  
Accept Terms  
and Agreement 1

IP: 192.168.200.67



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183 Pinana St., Kailua, HI 96734 • 808-262-1285 • [info@350Hawaii.org](mailto:info@350Hawaii.org)

To: The Committee on Zoning, Planning and Housing  
From: Brodie Lockard, Founder, 350Hawaii.org  
Date: Thursday, February 27, 2020

**In strong support of Bill 25, CD2 (Elefante version)**

Dear Chair Menor, Vice Chair Waters, and Members of the Zoning, Planning and Housing Committee,

350Hawaii.org writes in strong support of Bill 25, CD2, ***as introduced by Councilmember Elefante***. However, we do not support the points-based electric vehicle readiness compliance path. It avoids the EV readiness we really need.

In addition, we ask you to raise the EV-ready parking stall amount from 25% to 100%. Vancouver's requirement is already 100%.

A November poll showed that 82% of Oahu voters consider climate change to be a "very serious" problem or "somewhat serious," and are willing to act to combat it, both individually and collectively. Why are our Councilmembers so resistant to the desires of their constituents? According to the poll, of those surveyed [1],

- \* 81% favor updating building codes to require new homes to have solar water heaters, and to be read to charge electric vehicles. If that means added upfront costs to home builders while lowering utility bills to the homeowner in the long run, 74% still supported doing so.

- \* 50% would be likely to change their car to a hybrid or electric vehicle; two-thirds said they'd be likely to install solar hot water or a rooftop photovoltaic system.

- \* The pollster said Oahu residents do not blame other places for climate change, and believe it can be solved. "They were basically like, 'tell me what to do, I'm ready to go,'" she said. And she said the poll clearly showed that Oahu residents are not expecting climate change effects--they are experiencing them right now.

The American Cities Climate Challenge estimates that Bill 25's energy efficiency requirements will cost developers only an additional \$750 to \$3,200, less than 0.005% of a new home price. With 50% monthly savings on energy bills, homeowners and renters will recoup all of that quickly and save a great deal more in the following years [2].

Bill 25 began over a year ago as a compromise among stakeholders. Each time it comes up in a hearing, its proposed amendments favor the building groups more and more and more.

The Level 2 requirements may be lowered to Level 1. The percentage of EV-ready parking stalls may be tied to housing units rather than parking stalls. Developers may be allowed to aggregate EV-readiness across projects, with no minimum compliance for any individual project. The proposed point system for EV-readiness allows fewer charging stations, and now even the

points required may be reduced. There may be a second alternative compliance pathway for EV-readiness. For commercial property, EV-readiness requirements may be unspecified. All affordable housing may be exempt from EV-readiness.

Compare this long list to the two concessions environmental groups have received: requiring new roofs to be "solar-ready," meaning adding a few yards of conduit and wiring; and, in some proposed amendments, changing Level 1 charging to Level 2. This second change was so obviously necessary that it barely counts as a concession.

At January's ZPH hearing, D.R. Horton's lobbyist was treated with great deference and allowed to testify uninterrupted for about 10 minutes. Yet a Star-Advertiser Op-Ed last week noted that over 90% of written testimony at that hearing favored a strong Bill 25 [2]. Clearly, constituents, environmentalists, and other citizens concerned about the Climate Crisis receive minimal attention compared to developers and the building industry.

Currently, Honolulu ranks fourth-worst in the nation at encouraging energy-efficient buildings [2]. Is that a distinction we want to perpetuate?

Every month brings a new record un-natural catastrophe: hurricanes, heat waves, rain bombs, floods, wildfires, droughts. On February 16, a "bomb cyclone" caused 100-foot waves. In Britain. Are these horrors less important than the profit of a few construction companies? Someday soon, Honolulu will be slammed by a devastating hurricane, and the importance of action will be undeniable. But it will be too late to have helped avoid it.

Pass Bill 25 today. Then write some serious legislation that takes real, concrete action that will make a major difference in avoiding climate breakdown.

Government officials all over the world, at every level, think, "Well, we can't fix climate change by ourselves." And sure enough, every government official all over the world, at every level, is not fixing climate change. But someone needs to pitch in. **Hawaii** needs to pitch in.

Brodie Lockard  
Founder, 350Hawaii.org

[1] <https://www.civilbeat.org/2019/11/poll-oahu-voters-want-action-on-climate-change/>

[2] <https://www.staradvertiser.com/2020/02/17/editorial/island-voices/column-bill-25-provisions-would-be-affordable-for-builders-and-buyers/>



**COMMITTEE ON ZONING, PLANNING AND HOUSING**

**City and County of Honolulu**

**February 27, 2020, 9:00 A.M.**

**(Testimony is 11 pages long)**

**TESTIMONY IN SUPPORT OF BILL 25 (2019) CD1, WITH SUGGESTED AMENDMENTS  
Relating to the adoption of the State Energy Conservation Code**

Chair Menor, Vice Chair Waters, and Members of the Committee on Zoning, Planning and Housing:

Blue Planet Foundation supports Bill 25 (2019) CD1, a measure to modernize the City & County of Honolulu's (Honolulu's) building energy code. The proposed bill adopts a revised version of the Hawai'i Energy Code for Honolulu. These revisions would update Honolulu's existing building energy code—which is fourteen years out of date—to increase occupant health and comfort while reducing energy use. The proposed code revision reflects broad changes in technology, building materials, and best practices, while considering Honolulu's unique island and building environment.

Blue Planet has reviewed CD2 version proposed by councilmember Elefante. We **support some** of the changes made in this CD2, specifically:

1. The requirement for Level 2 electric vehicle (EV) charger readiness instead of Level 1 for residential buildings; and
2. The provisions for photovoltaic readiness for new homes.

We **do not**, however, support the amendments in the proposed CD2 which:

1. Establish an alternative "points" system for compliance with the EV charger readiness requirements;
2. Reduce EV charger readiness requirements for retail establishments;
3. Reduce EV charger readiness requirements for housing units in the 80 percent to 140 percent of the area median income for Honolulu;
4. Exempt production homes from the requirement that a ceiling fan or whole house fan is provided for bedrooms and the largest space that is not used as bedroom; and
5. Eliminate the specific county requirement for a solar water heater, heat pump, or smart water heater in new single-family homes.

We fear these proposed amendments in the proposed CD2 will ultimately raise the cost of living for Hawaii residents while missing opportunities to reduce our island's carbon emissions.

**We respectfully offer two proposed amendments on page 9 of our testimony to better "future-proof" new buildings to handle the rapid increase in zero emission vehicles.**

**[info@blueplanetfoundation.org](mailto:info@blueplanetfoundation.org)**

55 Merchant Street 17<sup>th</sup> Floor • Honolulu, Hawai'i 96813 • 808-954-6142 • [blueplanetfoundation.org](http://blueplanetfoundation.org)

Blue Planet Foundation is a Hawai'i-based nonprofit organization. We work to clear the path for local, clean, renewable power. Through our advocacy for clean energy adoption, we seek to make our communities stronger, our energy more secure, our environment healthier, and our economy more robust. We appreciate Honolulu's growing leadership on clean energy issues.

As detailed below, the building energy code update proposed in Bill 25 CD 1 is:

- enormously cost-effective for residents and business owners on O'ahu;
- consistent with the state's very strong policy directives in favor of energy conservation; and
- flexible to make compliance easier for builders.

Over the course of the past nice months of conversation on Bill 25, three things have shifted that shape our thinking on this proposal:

1. **The climate crisis has grown.** Over the past half year we have increasingly experienced the consequences of climate change—a direct result of our continued use of fossil fuels. Australia has experienced devastating fires over the past month, killing upwards of 1.5 billion animals and causing immeasurable damage. Hawai'i tied or broke over 270 high temperatures in 2019, and the waters surrounding the islands experienced record high temperatures. We are running out of time to aggressively act to reduce fossil fuel use globally.
2. **Fossil natural gas is being banned throughout the country.** An increasing number of cities across the country are banning natural gas for new buildings because of its threat to climate and health. Berkeley, California, was the first, followed in the state by San Jose, Mountain View, Santa Rosa and Brisbane. On the East Coast, Brookline, Massachusetts, last November became the first city in the state to ban new gas hookups. Dozens of other cities, from Cambridge and Newton in Massachusetts to Seattle, are considering similar bans. On the mainland, natural gas is now responsible for more climate-heating emissions than coal is. Globally, fossil gas is the fastest-growing source of climate change emissions, according to study published in Environmental Research Letters in December 2019.<sup>1</sup>
3. **The upcoming version of the international building energy code calls for 20% EV ready parking.** The International Code Council (the organization which develops the model code for cities and states to adopt) recently approved the inclusion of EV charger ready requirements in their 2021 building energy code.<sup>2</sup> This new provision by the fairly conservative International Code Council acknowledges the growing recognition that the future of transportation is electric, and substantially cost savings can be realized by preparing for EV chargers while buildings are under construction.

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<sup>1</sup> R B Jackson, et al. 2019. Environmental Research Letters. 14, 121001

<sup>2</sup> See <https://qz.com/1781774/new-us-building-codes-require-plugs-for-electric-cars/>

The Council has an opportunity to adopt a modernized building energy code for O'ahu that reflects our need to seriously address the climate crisis while ensuring long-term affordability for residents and businesses. An amended Bill 25, as proposed in this testimony, would do just that.

## The Code Updates Support the State's Energy Mandates in a Cost-Effective Manner

Energy efficiency is the most cost-effective energy resource available in the state, costing a fraction of fossil fuel-powered electricity.<sup>3</sup> The anticipated energy savings arising from the 2015 IECC (International Energy Conservation Code) were tabulated in a May 2016 Report prepared for the Department of Business, Economic Development & Tourism ("DBEDT").<sup>4</sup> When translated into dollars, the billions in savings plainly illustrate the enormous benefit of the proposed amendments.

Statewide Savings	2016	2026	2030	2036
MWh	12,962	1,083,590	1,991,059	4,702,738
\$	<b>\$4,000,000</b>	<b>\$337,000,000</b>	<b>\$619,000,000</b>	<b>\$1,463,000,000</b>

(Note: energy cost savings calculated here utilize the average retail cost of electricity over the past five years;<sup>5</sup> this provides a conservative estimate of cost savings, because it does not factor a potential rise in energy prices.)

Extrapolating the savings for O'ahu based on the percentage of energy used on the island versus statewide energy use, **the estimated 20-year savings for O'ahu is over \$971 million under the proposed building energy code revisions (approximately \$318 million in residential energy savings and \$653 million in commercial energy savings).**

The substantial savings resulting from reduced energy use dwarf the associated costs. In its February 2016 report, the Pacific Northwest National Laboratory stated: "The 2015 IECC provides cost-effective savings for residential buildings in Hawai'i. Moving to the 2015 IECC from the 2006 IECC base code is cost-effective for residential buildings in all climate zones in Hawai'i."<sup>6</sup> Moreover, we understand that this cost-effectiveness may be *even higher* for many residential buildings in Hawai'i, where immediate cost savings can be obtained via lower

<sup>3</sup> Energy savings delivered by the state's Hawai'i Energy program in 2016 cost 2.06 cents per kWh. See *Hawaii Energy 2014 Annual Report*, available at [https://hawaiienergy.com/images/resources/ProgramYear2016\\_AnnualReport.pdf](https://hawaiienergy.com/images/resources/ProgramYear2016_AnnualReport.pdf). Even with today's relatively low oil prices, electricity from oil-fired power plants costs around seven times more. See *DBEDT Monthly Energy Trends*, available at <http://dbedt.hawaii.gov/economic/energy-trends-2/>.

<sup>4</sup> See The Cadmus Group, Inc., *Energy Savings Forecast for the 2015 Int'l Energy Cons. Code with Haw. Amendments* (prep'd for DBEDT, May 2016), available at <https://energy.hawaii.gov/wp-content/uploads/2016/07/Energy-Savings-Forecast.pdf>.

<sup>5</sup> See DBEDT Monthly Energy Trends.

<sup>6</sup> Pac. Northwest Nat'l Lab., *Cost-Effectiveness Analysis of the Residential Provisions of the 2015 IECC for Hawaii* (prep'd for the U.S. Dept. of Energy by, Feb. 2016), available at [https://www.energycodes.gov/sites/default/files/documents/HawaiiResidentialCostEffectiveness\\_2015.pdf](https://www.energycodes.gov/sites/default/files/documents/HawaiiResidentialCostEffectiveness_2015.pdf)

construction costs *and* lower energy costs by utilizing the particularly important portions of the code applicable to the tropical zone. In such instances, the "payback" period would be immediate.

## The Code Updates Provide Compliance Flexibility to Builders

Many of the building energy code amendments in the proposed energy code update address Hawai'i's tropical environment. Further, they provide flexibility and options to builders to comply with the code, reducing construction costs and making compliance easier. Specifically:

- Walls of residential and commercial buildings are exempt from expensive exterior insulation requirements when they are shaded or have light-colored exterior coatings.
- Mass walls six inches and thicker in commercial buildings will not be required to have insulation. The national code requires R-5.7 continuous insulation, which would add substantially to the cost of construction.
- Lighting systems in commercial buildings may be designed to 70% of 2015 IECC lighting power density in lieu of installing complex daylighting and dimming systems which add to design, material and labor costs. The 70% option reaps greater energy savings than would the two control systems.
- Roof replacements in commercial buildings may be done with solar reflectance, attic ventilation or radiant barriers, substantially reducing construction costs compared to national code requirements.
- Homes will not be required to insulate floors to R-13, substantially reducing construction costs.
- Re-roofed homes will be allowed to comply with the options of ENERGY STAR roof coverings, radiant barriers, or attic ventilation in lieu of more expensive insulation requirements.
- The Tropical Code option section is designed for homes with no air conditioning or minimal air conditioning. The design eliminates the requirement for tight home construction and minimizes wall and roof insulation requirements. The point system rewards design promoting cross ventilation and large overhangs over walls and windows and other passive design features, lowering construction costs. An optimized Tropical Code home, compared to an air-conditioned home, reduces energy by as much as 48%.

## The Code Makes Sensible Additions to Honolulu's Building Energy Code

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In addition to the myriad energy saving additions incorporated in the updated IECC 2015 building energy code (as proposed for Honolulu), Blue Planet Foundation appreciates the inclusion of the following energy upgrades in this proposed ordinance:

- Sub-metering is required in commercial tenant spaces, providing more visibility into energy use for tenants and enabling them to take better control of their energy finances.
- Lanai doors in hotel and similar buildings shall include a switch that turns off the air conditioning if the door is not closed. This reduces energy costs and prevents warm moist air from coming into contact with cold surfaces, potentially causing condensation, mold, and health issues.

## Bill 25 CD1 Wisely Provides High-Efficiency and Renewable Water Heater Options

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Solar water heating is recognized as an incredibly efficient—and cost-saving—strategy for most homes. Since 2010, the state has required solar water heating in almost all new homes. But this law has a variance process for rare exceptions where solar just doesn't work. Unfortunately, this variance has been abused by developers, despite the legislature's clear intent that variances "will be rarely, if ever, exercised or granted." Consequently, nearly half of new homes proposed or being built today on O'ahu include fossil-fuel gas water heaters. Thousands of homes on the hot Ewa Plain of O'ahu are slated to be built with gas water heaters, locking future homeowners into higher energy costs over years of home ownership. Instead of being part of our clean energy future, these homes will contribute to climate change for decades into the future.

Bill 25 CD1 corrects the solar water loophole, ensuring that new homes built today come equipped with water heaters powered by the sun (or another renewable source), or—if a renewable source isn't cost effective—a water heater that works as a heat pump, a "smart" grid-interactive water heater, or a water heater that uses at least 90% renewable gas. Again, if a solar- or renewable-powered water heater does not make sense economically—based upon a lifecycle cost-benefit analysis that incorporates the average residential utility bill and the cost of the new solar water heater system with a lifecycle that does not exceed fifteen years—then one of the following technologies advancing clean energy may be used instead:

*Heat pump water heater.* A heat pump uses electricity to move heat from one place to another (like a refrigerator operating in reverse) rather than generating its own heat like a traditional electric water heater. This makes heat pumps two to three times more efficient, according to the Department of Energy (DOE). Heat pumps can also work to help cool homes. According to the DOE, a heat pump water heater can save an O'ahu household of four people nearly \$1,000 per year on their electric bill.

*Grid-interactive water heater (GIWH).* A GIWH is a smart water heater that uses intelligent controls that are capable of interacting with and participating in utility load control or demand response programs. This allows the water heater to be an asset on the utility grid by smoothing out electricity usage and increasing the use of variable renewable energy. A local company, Shifted Energy, has already deployed hundreds of GIWH systems across O'ahu.

*Renewable gas water heater.* A renewable gas water heater would heat water using no less than 90% renewable gas fuel. This could be natural gas or methane produced from renewable sources (such as biomass or methane from wastewater treatment plants or landfills), or hydrogen gas developed from renewable sources.

This addition to the proposed building energy code update provides flexibility to developers while ensuring that future homes will be built with high-efficiency or renewable water heaters.

## Bill 25 CD1 Helps Make Electric Vehicles More Accessible to Residents

Blue Planet Foundation strongly supports the inclusion of a limited “EV-ready” requirement for new commercial and multi-family residential construction in Bill 25 CD1. This is an important first step to lowering the overall cost of our transition to electrified transportation and make electric vehicles more accessible to O'ahu residents. *We do, however, encourage the Council to strengthen this provision in Bill 25 CD1 (please see our proposed amendment at the end of this testimony).*

Electric vehicles (EV) are the fastest growing segment of new cars in Hawai'i. Over roughly the past year (January 2019 – January 2020), EV registrations on O'ahu increased by 31%, while registrations of gasoline-powered vehicles grew only 1 percent.<sup>7</sup> We expect the number of registered EVs to grow substantially as new EV models with longer ranges and lower prices hit the market.

Electric vehicles will play an integral role in Hawai'i's clean energy future. While EVs that use the existing electricity grid to charge still use mostly fossil fuel, they use that fuel more effectively than burning fuel directly in a typical gasoline engine. This is why EVs are much less expensive to “fuel” per mile than their gasoline counterparts. Further, by using stored electrical energy, EVs can take advantage of intermittent solar, wind, and other clean energy resources. Most vehicles sit idle over 22 hours of the day, so they can become *de facto* energy storage devices if their batteries are plugged into the grid when they are not in use. With smart grid infrastructure in place, EVs become an essential component to electricity load and clean energy resource balancing—in addition to providing clean mobility solutions for Hawai'i residents.

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<sup>7</sup> DBEDT Monthly Energy Trends, February 2020 (<http://dbedt.hawaii.gov/economic/energy-trends-2/>).

Still, over 600,000 gasoline-powered vehicles are on O'ahu's roads—and from them comes nearly five million metric tons of climate-changing carbon pollution. What's worse, while O'ahu has made decent progress in reducing its carbon emissions from the electricity sector, emissions from ground transportation have been increasing in recent years.

The International Energy Agency has found that “the availability of chargers emerged as one of the key factors for contributing to the market penetration of EVs.”<sup>8</sup> Unlike gasoline car owners, charging behavior for EV owners indicates that more than 80% of EV drivers charge their cars at home or at work.<sup>9</sup> In addition, a large share of the Honolulu's population lives in high density, multi-family residential buildings. The vast majority of parking facilities currently lack EV chargers.

By ensuring that we are “future-proofing” new construction projects, this measure is an important step toward increasing electric vehicle charging options for those who don't have access to charging at home or at work.

Honolulu can expect more residents to choose EVs over gasoline vehicles as prices decrease. Battery costs have fallen precipitously over the past several years so that in many cases, the total cost of ownership for EVs is lower than for gasoline vehicles. Experts expect battery prices to continue to fall and as automakers increase the number of models and volume of EVs in the next few years, the upfront cost of EVs is expected to reach upfront cost parity with gasoline vehicles by 2024.<sup>10</sup>

In part due to falling costs and increasing consumer demand, and in part due to government policies supporting EVs, nearly all of the world's leading automakers have announced aggressive strategies and investments in EVs during the past two years.

The most challenging aspect of EV charger installation is the common lack of electrical capacity and distributed subpanels to support broad deployment of charging infrastructure. **By choosing not to install the wiring and conduit upfront in new construction, developers are forcing tenants to pay for expensive retrofit costs to upgrade power capacity and wiring to their parking stalls.**

Studies have shown that **installing EV infrastructure at the time of construction can be 91% less expensive than post-construction retrofits**, and per stall installation costs can be reduced through economies of scale.<sup>11</sup> Vancouver, BC, found that the average cost of adding charging infrastructure during construction was as low as \$300 (CAD) per stall compared to an estimated \$3,300 for a later retrofit.

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<sup>8</sup> *Global EV Outlook 2017*, <https://www.iea.org/publications/freepublications/publication/GlobalEVO Outlook2017.pdf>.

<sup>9</sup> *Id.*

<sup>10</sup> See Bloomberg New Energy Finance, <https://bnef.turtl.co/story/evo2018>.

<sup>11</sup> See <http://evchargingpros.com/wp-content/uploads/2017/04/City-of-SF-PEV-Infrastructure-Cost-Effectiveness-Report-2016.pdf>.

While this bill would not require the installation of the actual EV charging infrastructure, it would require that the power capacity and conduit be set up during construction, which would dramatically reduce retrofit costs at the time of charger installation, creating cost savings downstream for residents and tenants.

Cities around North America are adopting EV-ready requirements for commercial and residential new construction. Seattle, San Jose, Atlanta, San Francisco, and Oakland have adopted requirements for a certain percentage of stalls to be ready for Level 2 charging. Vancouver, British Columbia, now requires that 100% of new parking stalls be built ready for EV chargers. Honolulu—with the second highest adoption of EVs per capita nationwide—should implement a similar policy.

Electric vehicles are better for the environment and the economy and can help O'ahu reach its renewable energy and transportation goals. The time has come when Honolulu residents want to purchase electric vehicles but need convenient and affordable charging options. An EV-ready requirement will ensure that the EV charging infrastructure network necessary to support the influx of electric vehicles can be installed more efficiently and cost-effectively in new construction projects. It will provide new EV owners—particularly those that will live in new multi-family residential buildings—with the confidence that they will be able to access charging at home, at the workplace, and in public spaces.

## SUGGESTED AMENDMENTS

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Blue Planet Foundation respectfully requests that Councilmembers consider two amendments to strengthen Bill 25 CD1 to better “future-proof” new multi-family homes and buildings to handle the rapid increase in zero emission vehicles:

1. First, we ask that the provision in Bill 25 CD1 for EV-ready infrastructure be amended to **require Level 2 EV-ready infrastructure** instead of Level 1 for multi-family residential construction with over eight parking stalls; and
2. Second, we suggest that the requirement for Level 2 EV-ready parking stalls to applied to **all new parking stalls** in multi-family and commercial buildings.

The current draft of Bill 25 CD1 requires that residential multi-family dwellings (with more than eight parking stalls) include at least 25% EV-ready stalls—but only equipped to handle Level 1 (or slow) charging infrastructure. This is woefully inadequate for meaningful vehicle charging and significantly reduces the opportunity to use vehicle charging for utility demand response or load control programs. Further, the current provision in Bill 25 CD1 is a departure from the EV-ready requirements that are increasingly being adopted around the country, which are standardized around Level 2 charging.

Level 1 charging, or “trickle charging,” means charging an EV using a standard 120-volt outlet. The rate of charge associated with this is roughly four miles of driving range per hour of

charging. Below is a list of the most commonly purchased EVs and the associated charging time for a full charge from a Level 1 charger:

- Nissan Leaf – 1.7 to 2.6 days
- Chevy Bolt – 2.5 days
- Tesla Model 3 – 2.5 to 3.1 days

These charging times are impractical for most drivers and would likely lead to unnecessary cost for residents to later upgrade the electrical equipment to handle faster charging. To the degree the intent of the proposed EV-ready amendment is to ensure that buildings are constructed in a manner that can effectively support the decision of Honolulu residents to purchase an EV, this particular provision needs to be changed to require Level 2 charging.

Blue Planet Foundation also supports expanding this EV-ready requirement from 25% of new stalls to 100% of new parking stalls. With the rapid rate of change in the adoption of EVs, we expect that most new cars sold in Hawaii will be electric or hybrid within a decade. Yet Bill 25 CD1 as currently drafted only envisions 25% of new stalls needing future chargers. It is also unclear how these stalls will be allocated to future homeowners, tenants, or renters—will those who would like to install an EV charger be able to access the one-in-four stalls that are EV-ready? This measure should reflect and anticipate the future where nearly all vehicles are zero emissions. This is particularly important given the slow pace of updating Honolulu's building energy code. Failure to do so will lead to unnecessary expense in retrofitting relatively recent buildings with what will soon be commonplace amenities.

This is also an issue of equity. It's likely that the initial group of individuals purchasing EVs will be more affluent than later adopters—this holds true for many innovations, as they are initially more expensive. They will be positioned to take advantage of the 25% of stalls that are EV-ready. But what about later adopters who are less affluent? this policy may have the effect of burdening these later EV adopters with the high costs of retrofitting to install EV infrastructure in already completed buildings. Simply requiring that all stalls are EV-ready avoids this potential inequity.

Requiring that all new parking stalls be EV-ready is not without precedent. Again, the city of Vancouver, BC, passed a law updating their four-year-old EV-ready requirement from 20% of new residential stalls to 100% of new stalls.<sup>12</sup> The law took effect January 1, 2019. Since 2014, existing requirements have resulted in 20,000 electric vehicle-ready stalls in buildings.<sup>13</sup> Other cities are considering similar 100% EV-ready policies.

To accomplish this, Blue Planet Foundation requests that the proposed language in Bill 25 CD1 relating to Subsection C406.8 should be modified as follows (underlined indicates additions, ~~strikethrough~~ indicates deletions):

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<sup>12</sup> See <https://vancouver.ca/streets-transportation/electric-vehicles.aspx>

<sup>13</sup> See <https://www.vancourier.com/news/city-council-boosts-electric-vehicle-infrastructure-1.23202750>

**C406.8 Electric vehicle infrastructure.** ~~All parking stalls in n~~New residential multi-unit buildings ~~that have eight or more parking stalls, and new commercial buildings that have twelve or more parking stalls,~~ shall be electric vehicle charger ready ~~for at least 25 percent of the parking stalls.~~ As used in this section, “electric vehicle charger ready” means that sufficient wire, conduit, electrical panel service capacity, overcurrent protection devices and suitable termination points are provided to connect to a charging station capable of providing simultaneously an AC Level 4 2 charge per ~~required~~ parking stall ~~for residential and multi-unit buildings.~~ For commercial buildings, ~~at least 25 percent of the parking stalls are required to be AC Level 2 charger ready.~~ Charge method electrical ratings are provided below:

CHARGE METHODS ELECTRICAL RATING

Charge Method	Normal Supply Voltage (Volts)	Maximum Current (Amps – Continuous)	Supply Power
AC Level 1	<del>120V AC, 1-Phase</del> 120V AC, 1-Phase	<del>12A</del> 16A	<del>120VAC/20A (12-16A continuous)</del>
AC Level 2	208 to 240V AC, 1-Phase	≤ 80A	208/240VAC/20-100A (16-80A continuous)

Blue Planet Foundation is open to working with the Council on identifying ways to make this EV-ready policy more acceptable to all stakeholders. Potential approaches to decreasing the potential burden of this proposed EV-ready policy (as amended) include:

1. **Phase-in period.** Increase the required percentage of stalls in phases (i.e. 25% of new stalls starting January 1, 2020; 50% starting January 1, 2021; 75% starting January 1, 2022; 100% starting January 1, 2023).
2. **Limit requirement.** For multi-family buildings, visitor parking could be excluded (Vancouver does not require visitor parking to be EV-ready).
3. **Allow the use of EV Energy Management Systems (EV EMS).** Providing the capability for every parking stall to charge an EV at Level 2 may lead to unnecessary expense in developing the building's electrical capacity (transformer, circuit capacity, etc.). In reality, all cars charging at once is an unlikely scenario, but engineers would need to design for that extreme possibility. In order to minimize the impact on builders and the utility grid, Vancouver's requirements allow the use of an EV EMS. Because most personal vehicles are parked for 8 to 10 hours per day at home, an EV EMS allows multiple vehicles to share a circuit. This significantly reduces construction costs and utility costs. In Vancouver's law, an EV EMS must ensure that every EV charging outlet receive at least 12kWh over an 8-hour period. This means that, even if a vehicle is plugged into every single outlet at once, all EVs will receive enough energy for the next

day (about 50 miles with today's EV technology, or about twice the average daily distance driven on O'ahu).

4. ***Exempt true affordable housing.*** While we believe everyone should be afforded the opportunity to use low-cost, low-carbon mobility solutions such as EVs, we would be open to exempting affordable housing below 80 percent of the Honolulu AMI for a limited period of time.

Blue Planet Foundation would be happy to provide draft language to the Committee accomplish this and ensure that we have a smart EV-ready policy for new construction on O'ahu that maximizes the benefits of clean transportation and smart buildings for all.

## Conclusion

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The proposed Honolulu building energy code amendments in Bill 25 CD1 are sensible, cost-effective, and flexible. They are a meaningful response to our climate crisis and the need to decrease the cost of living for O'ahu residents. Blue Planet Foundation strongly supports Bill 25's adoption with our proposed amendment to increase the EV-ready provision to handle Level 2 charging in all new parking stalls. We are happy to answer any questions about this proposed bill or our testimony. Mahalo for this opportunity to provide testimony.